

# **FUNAI** **SERVICE MANUAL**

## **Sec. 1: Main Section**

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's

## **Sec. 2: Deck Mechanism Section**

- Standard Maintenance
- Alignment for Mechanism
- Disassembly/Assembly of Mechanism
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## **Sec. 3: Exploded views and Parts List Section**

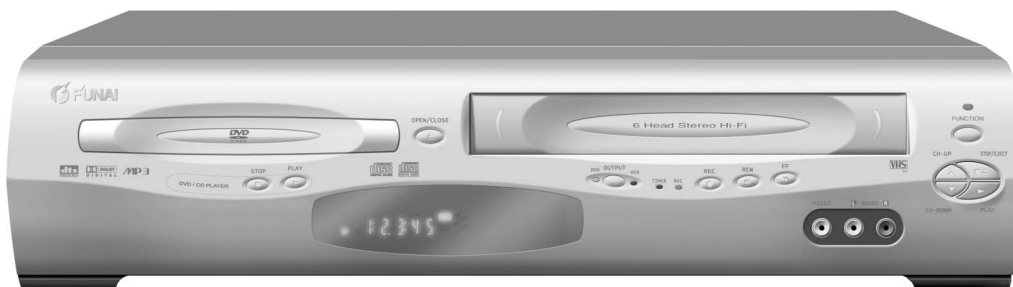
- Exploded views
- Parts List

## **DVD PLAYER & VIDEO CASSETTE RECORDER**

### **DPVR-4600**



### **DPVR-4800**



# MAIN SECTION

## DVD PLAYER & VIDEO CASSETTE RECORDER

### DPVR-4600/DPVR-4800

#### Sec. 1: Main Section

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's

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# SPECIFICATIONS

## < VCR Section >

Description	Unit	Minimum	Nominal	Maximum	Remark
<b>1. Video</b>					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	SP Mode
1-2. Video Output (R/P)	Vp-p	0.8	1.0	1.2	
1-3. Video S/N Y (R/P)	dB	40	45		SP Mode, W/O Burst
1-4. Video Color S/N AM (R/P)	dB	37	41		SP Mode
1-5. Video Color S/N PM (R/P)	dB	30	36		SP Mode
1-6. Resolution (PB)	Line	230	245		SP Mode
<b>2. Servo</b>					
2-1. Jitter Low	μsec		0.07	0.12	SP Mode
2-2. Wow & Flutter	%		0.3	0.5	SP Mode
<b>3. Normal Audio</b>					
3-1. Output (PB)	dBV	-9	-4	-3	SP Mode
3-2. Output (R/P)	dBV	-9	-4	-1.5	SP Mode
3-3. S/N (R/P)	dB	36	41		SP Mode
3-4. Distortion (R/P)	%		1.0	4.0	SP Mode
3-5. Freq. resp (R/P) at 200Hz	dB	-6	-2		SP Mode
(-20dB ref. 1kHz) at 8kHz	dB	-8	-2		SP Mode
<b>4. Tuner</b>					
4-1. Video output	Vp-p	0.8	1.0	1.2	E-E Mode
4-2. Video S/N	dB	39	44		E-E Mode
4-3. Audio output	dB	-10	-6	-2	E-E Mode
4-4. Audio S/N	dB	40	46		E-E Mode
<b>5. Hi-Fi Audio</b>					
5-1. Output	dBV	-12	-9	-4	SP Mode
5-2. Dynamic Range	dB	70	85		SP Mode
5-3. Freq. resp (6dB B.W)	Hz		20 ~ 20K		SP Mode

**Note:** Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

## < DVD Section >

ITEM	CONDITIONS	UNIT	NOMINAL	LIMIT
1. Video Output	75 ohm load	Vpp	1.0	± 0.1
2. Optical Digital Out		dBm	-18	
3. Audio (PCM)				
3-1. Output Level	1kHz 0dB	Vrms	2.0	
3-2. S/N		dB	85	
3-3. Freq. Response				
DVD	fs=48kHz 20~22kHz	dB	± 0.5	
CD	fs=44.1kHz 20~20 kHz	dB	± 0.5	
3-4. THD+N				
DVD	1 kHz 0dB	%	0.02	
CD	1 kHz 0dB	%	0.03	

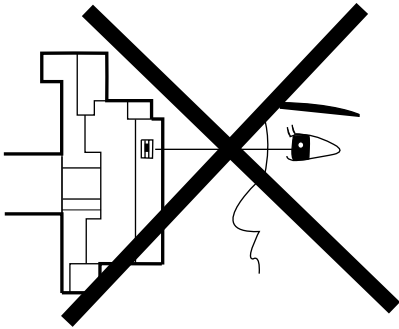
### NOTES:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply : AC220 - 240 V 50 Hz
3. Load imp. : 100 K ohm
4. Room ambient : 5 °C ~ 40 °C



# LASER BEAM SAFETY PRECAUTIONS

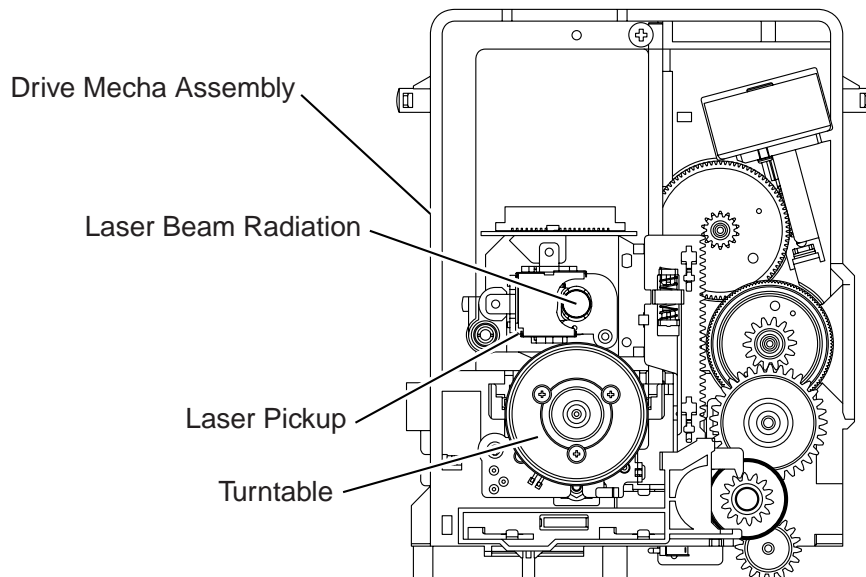
This DVD player uses a pickup that emits a laser beam.



**Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.**

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

**Caution:** Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



# IMPORTANT SAFETY PRECAUTIONS

## Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

## Precautions during Servicing

- A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.
- B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.  
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.
- C. Use specified internal wiring. Note especially:
  - 1) Wires covered with PVC tubing
  - 2) Double insulated wires
  - 3) High voltage leads
- D. Use specified insulating materials for hazardous live parts. Note especially:
  - 1) Insulation tape
  - 2) PVC tubing
  - 3) Spacers
  - 4) Insulators for transistors
- E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.
- F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
- G. Check that replaced wires do not contact sharp edges or pointed parts.
- H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.
- I. Also check areas surrounding repaired locations.
- J. Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.
- K. Crimp type wire connector  
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.  
Replacement procedure
  - 1) Remove the old connector by cutting the wires at a point close to the connector.  
**Important:** Do not re-use a connector. (Discard it.)
  - 2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
  - 3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
  - 4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.
- L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

## Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

### 1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

**Table 1 : Ratings for selected area**

AC Line Voltage	Clearance Distance (d) (d')
220 - 240 V	$\geq 3\text{mm}(d)$ $\geq 6\text{ mm}(d')$

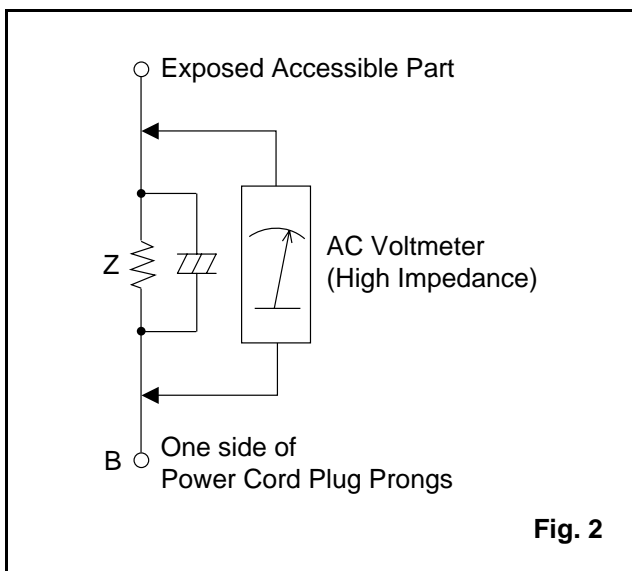
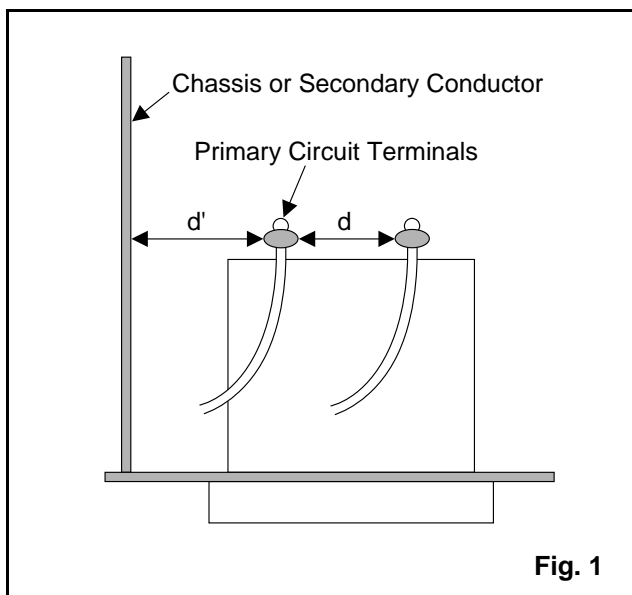
**Note:** This table is unofficial and for reference only.  
Be sure to confirm the precise values.

### 2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

#### Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.



**Table 2: Leakage current ratings for selected areas**

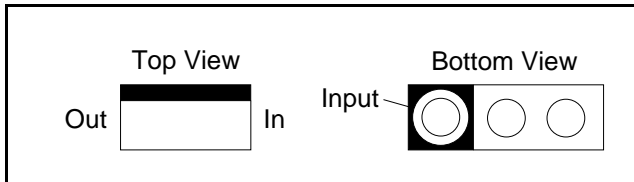
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
220 - 240 V	2k $\Omega$ RES. Connected in parallel	$i \leq 0.7\text{mA AC Peak}$ $i \leq 2\text{mA DC}$	RF or Antenna terminals
	50k $\Omega$ RES. Connected in parallel	$i \leq 0.7\text{mA AC Peak}$ $i \leq 2\text{mA DC}$	A/V Input, Output

**Note:** This table is unofficial and for reference only. Be sure to confirm the precise values.

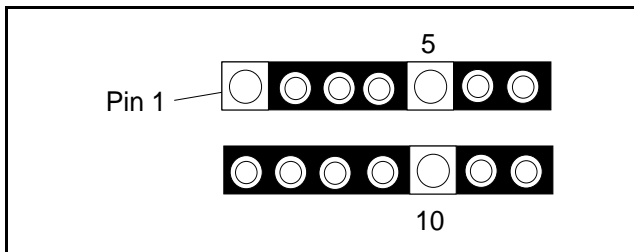
# STANDARD NOTES FOR SERVICING

## Circuit Board Indications

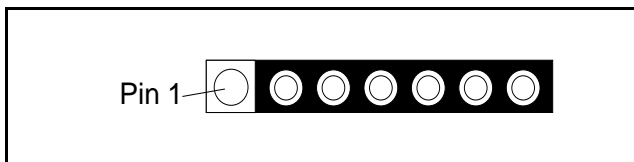
- a. The output pin of the 3 pin Regulator ICs is indicated as shown.



- b. For other ICs, pin 1 and every fifth pin are indicated as shown.

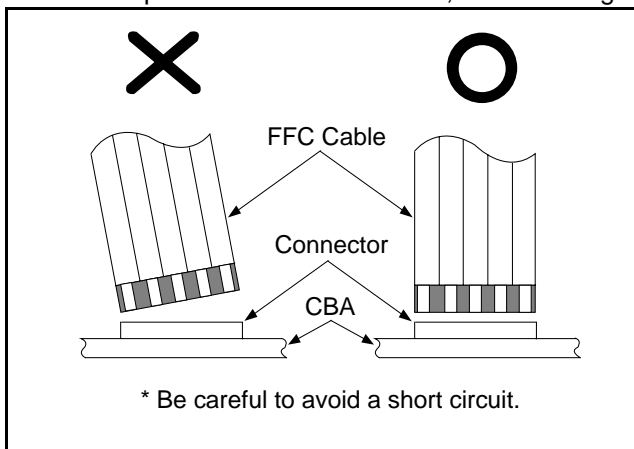


- c. The 1st pin of every male connector is indicated as shown.



## Instructions for Connectors

- When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
- FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.

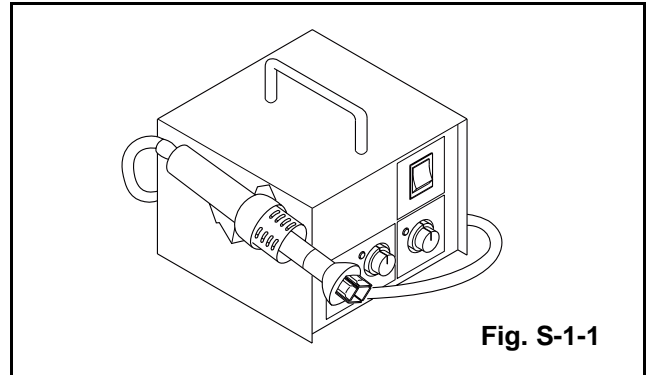


## How to Remove / Install Flat Pack-IC

### 1. Removal

**With Hot-Air Flat Pack-IC Desoldering Machine:**

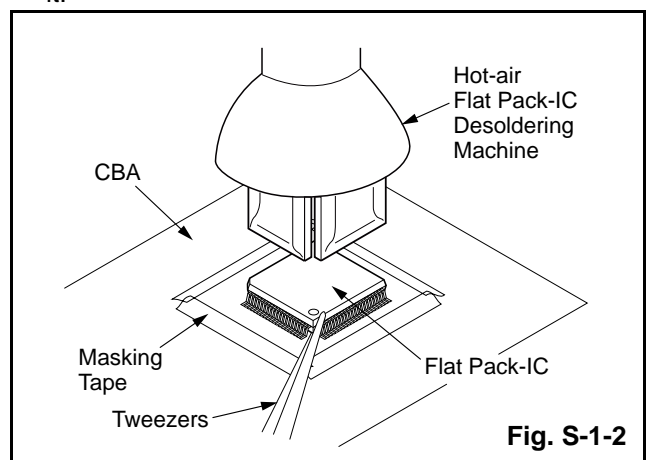
- (1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)



- (2) Remove the flat pack-IC with tweezers while applying the hot air.
- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

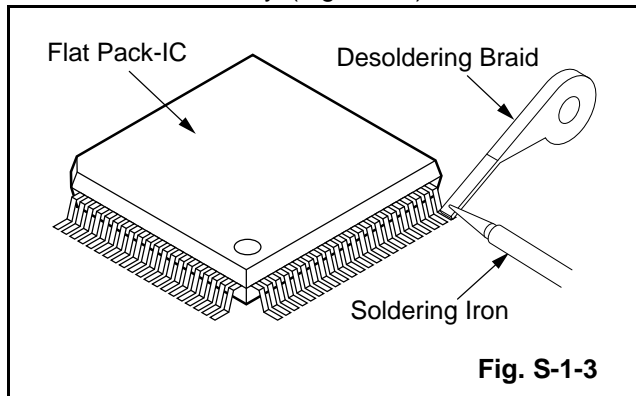
### Caution:

- Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
- The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

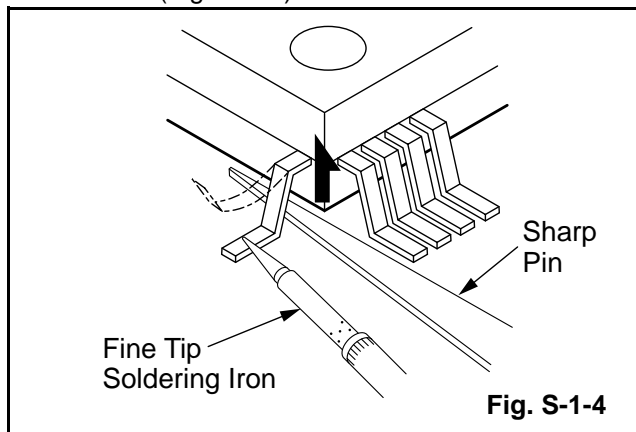


### With Soldering Iron:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



- (2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)



- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

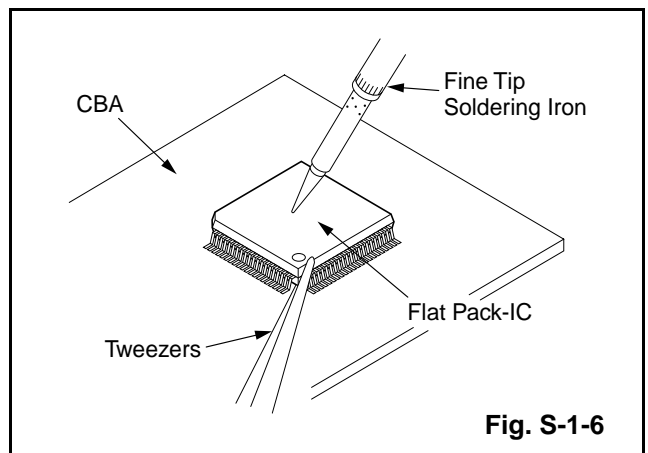
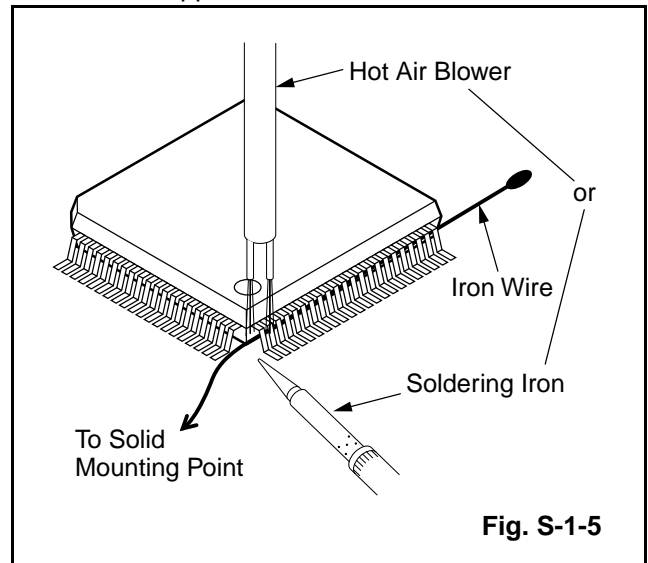
### With Iron Wire:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
- (2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- (3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5

- (4) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (5) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

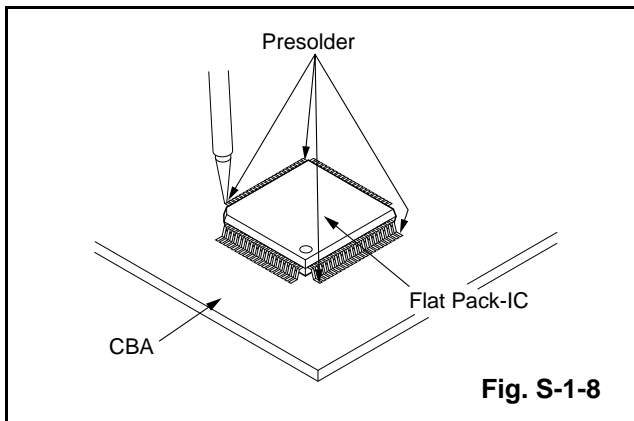
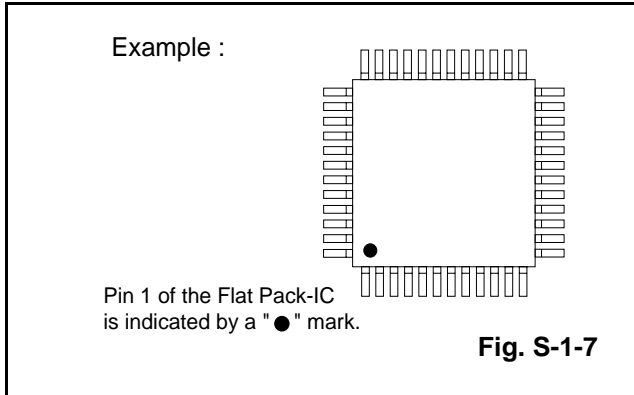
### Note:

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



## 2. Installation

- (1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
- (2) The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
- (3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



## Instructions for Handling Semi-conductors

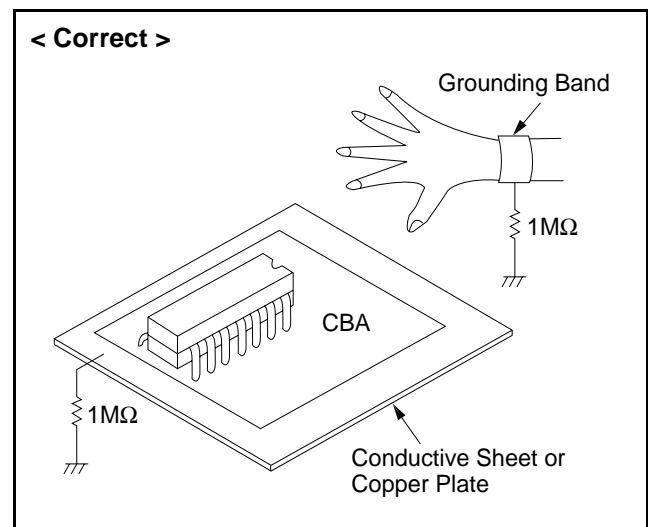
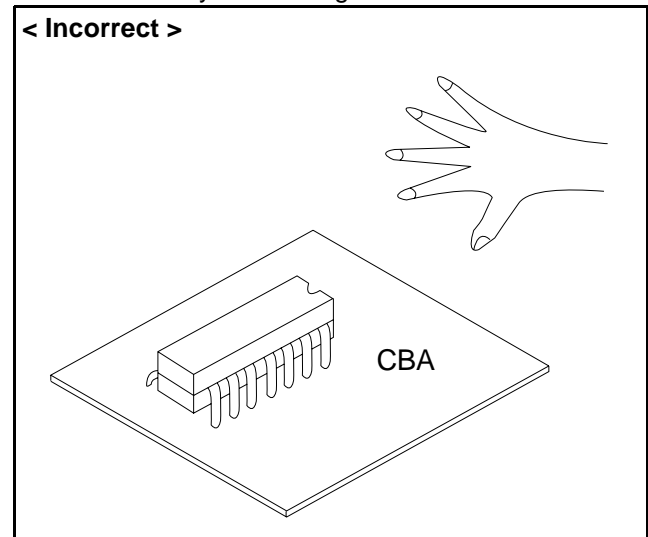
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

### 1. Ground for Human Body

Be sure to wear a grounding band ( $1M\Omega$ ) that is properly grounded to remove any static electricity that may be charged on the body.

### 2. Ground for Workbench

- (1) Be sure to place a conductive sheet or copper plate with proper grounding ( $1M\Omega$ ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.



# PREPARATION FOR SERVICING

## How to Enter the Service Mode

### AAbout Optical Sensors

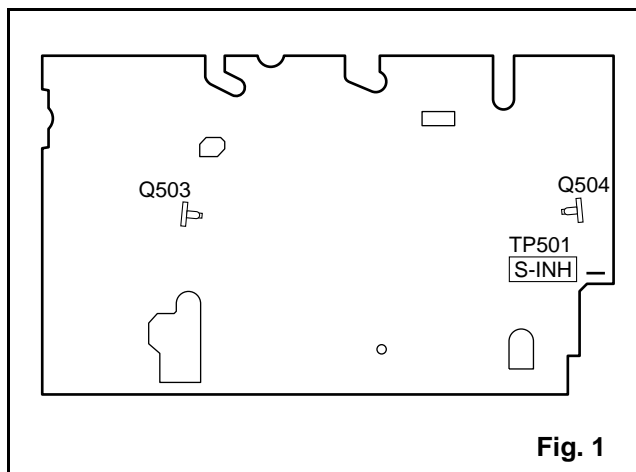
#### **Caution:**

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

#### **What to do for preparation**

Insert a tape into the Deck Mechanism Assembly and press the PLAY button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect TP501 (SENSOR INHIBITION) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

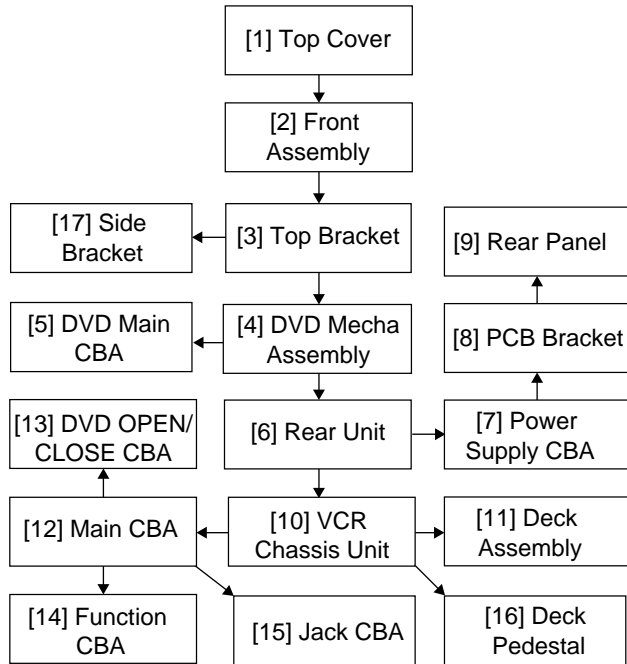
**Note:** Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.



# CABINET DISASSEMBLY INSTRUCTIONS

## 1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



## 2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[1]	Top Cover	D1	7(S-1)	-
[2]	Front Assembly	D2	(S-2), *7(L-1)	1 1-1 1-2
[3]	Top Bracket	D2	2(S-3), 2(S-3A)	-
[4]	DVD Mecha Assembly	D3	3(S-4), *CN302, *CN401, *CN601	-
[5]	DVD Main CBA	D4	2(S-5), *CN201, *CN301	2 2-1 2-2 2-3 3
[6]	Rear Unit	D5	5(S-6), 4(S-7), CN1005	-
[7]	Power Supply CBA	D6	2(S-8), 2(S-8A)	-

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[8]	PCB Bracket	D6	3(S-9)	-
[9]	Rear Panel	D6	-----	-
[10]	VCR Chassis Unit	D7	5(S-10), 2(S-11), 2(S-11A)	-
[11]	Deck Assembly	D8	Desolder, (S-12), (S-12A)	4,5
[12]	Main CBA	D8	-----	-
[13]	DVD OPEN/CLOSE CBA	D8	Desolder	-
[14]	Function CBA	D8	Desolder	-
[15]	Jack CBA	D8	Desolder	-
[16]	Deck Pedestal	D9	7(S-13)	-
[17]	Side Bracket	D9	(S-14)	-

↓  
(1)

↓  
(2)

↓  
(3)

↓  
(4)

↓  
(5)

### Note:

(1): Identification (location) No. of parts in the figures

(2): Name of the part

(3): Figure Number for reference

(4): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

P=Spring, L=Locking Tab, S=Screw, CN=Connector

\*=Unhook, Unlock, Release, Unplug, or Desolder

e.g. 2(S-2) = two Screws (S-2),

2(L-2) = two Locking Tabs (L-2)

(5): Refer to "Reference Notes."



## Reference Notes

**CAUTION 1:** Locking Tabs (L-1) are fragile. Be careful not to break them.

1-1. Remove Screw (S-3).

1-2. Release seven Locking Tabs (L-1) (to do this, first release five Locking Tabs (A) at the side and top, and then release two Locking Tabs (B) at the bottom.)

**CAUTION 2:** Electrostatic breakdown of the laser diode in the optical system block may occur as a potential difference caused by electrostatic charge accumulated on cloth, human body etc., during unpacking or repair work.

To avoid damage of pickup follow next procedures.

2-1. Slide the pickup unit as shown in Fig. D4.

2-2. Short the three short lands of FPC cable with solder before removing the FFC cable (CN301) from it. If you disconnect the FFC cable (CN301), the laser diode of pickup will be destroyed. (Fig. D4)

2-3. Disconnect Connector (CN201). Remove two Screws (S-5) and lift the DVD Main CBA. (Fig. D4)

**CAUTION 3:** When reassembling, confirm the FFC cable (CN301) is connected completely. Then remove the solder from the three short lands of FPC cable. (Fig. D4)

**CAUTION 4:** When reassembling, solder wire jumpers as shown in Fig. D8.

**CAUTION 5:** Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. D8. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. D8.

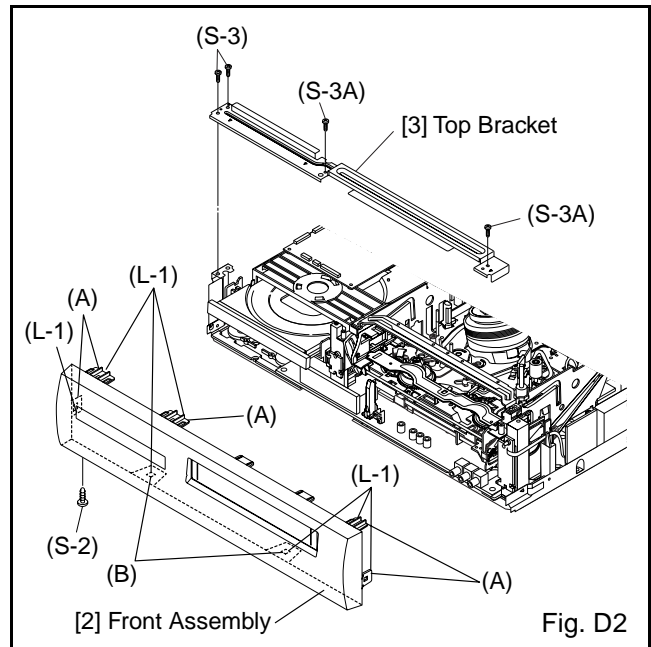


Fig. D2

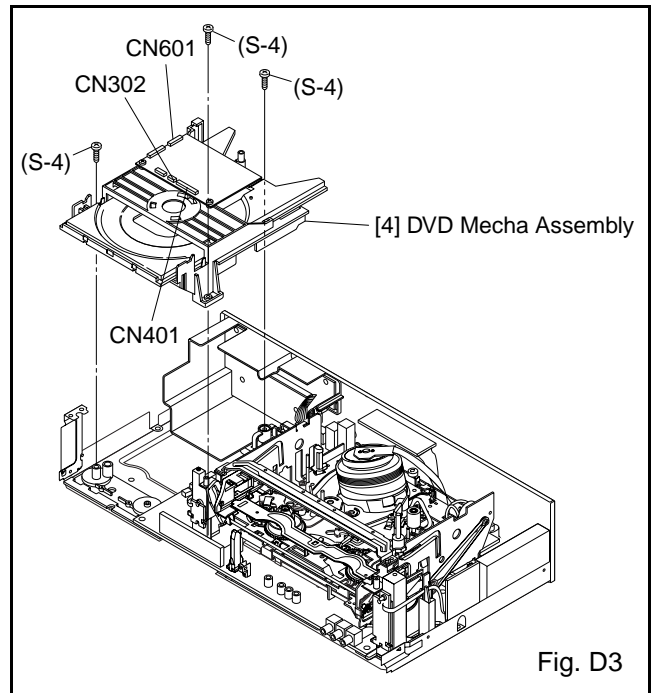


Fig. D3

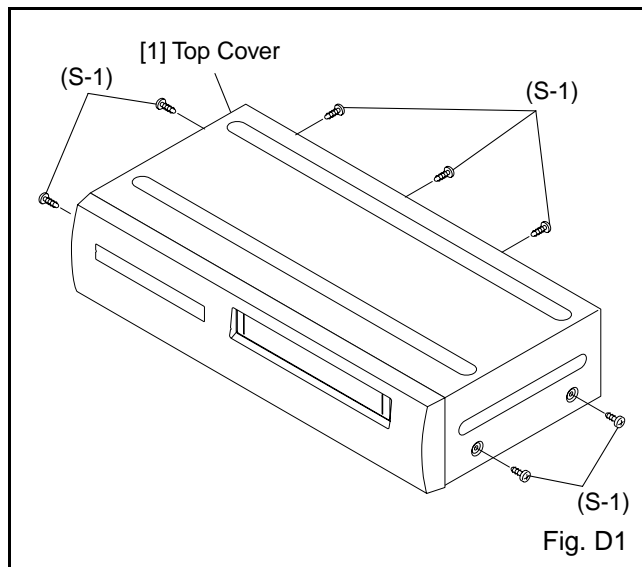


Fig. D1

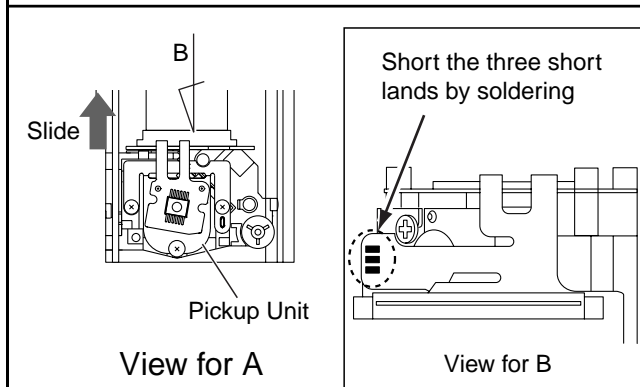
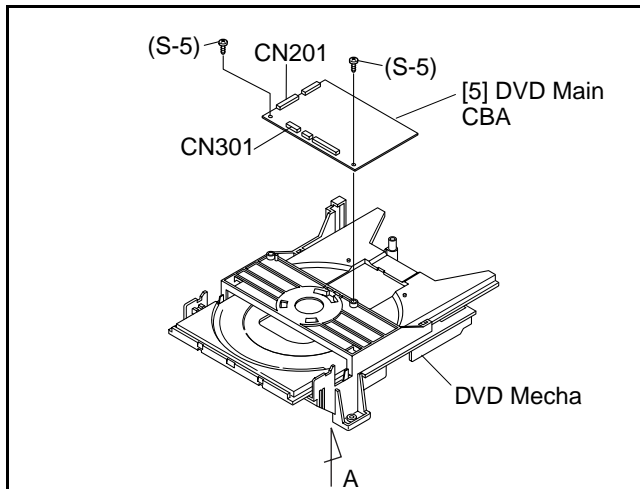
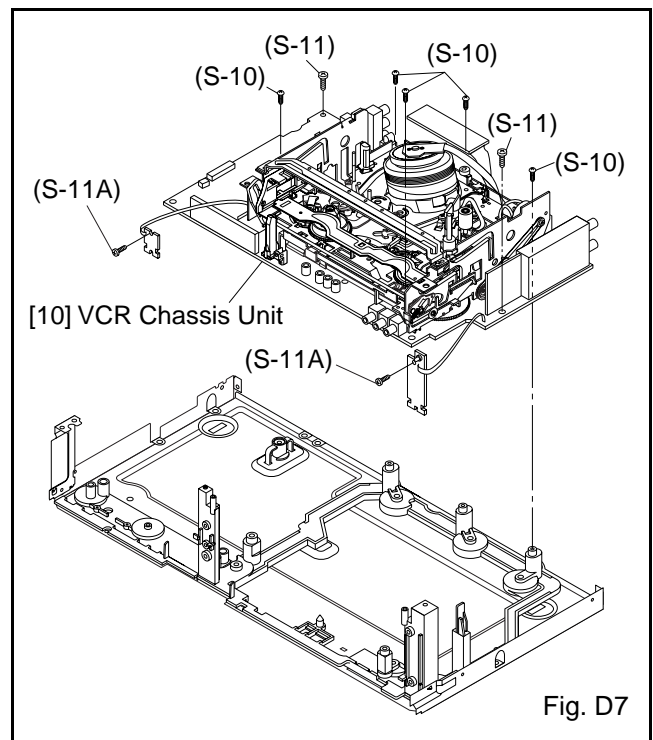
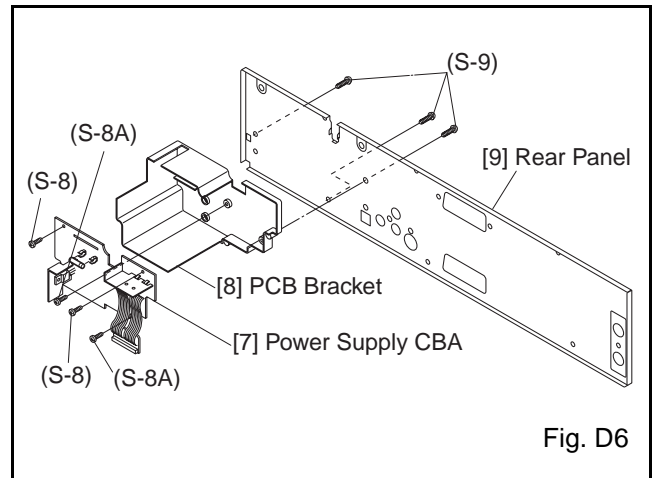
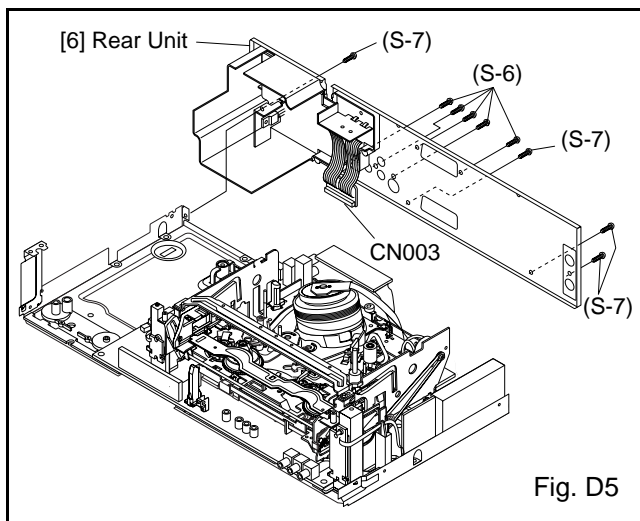


Fig. D4



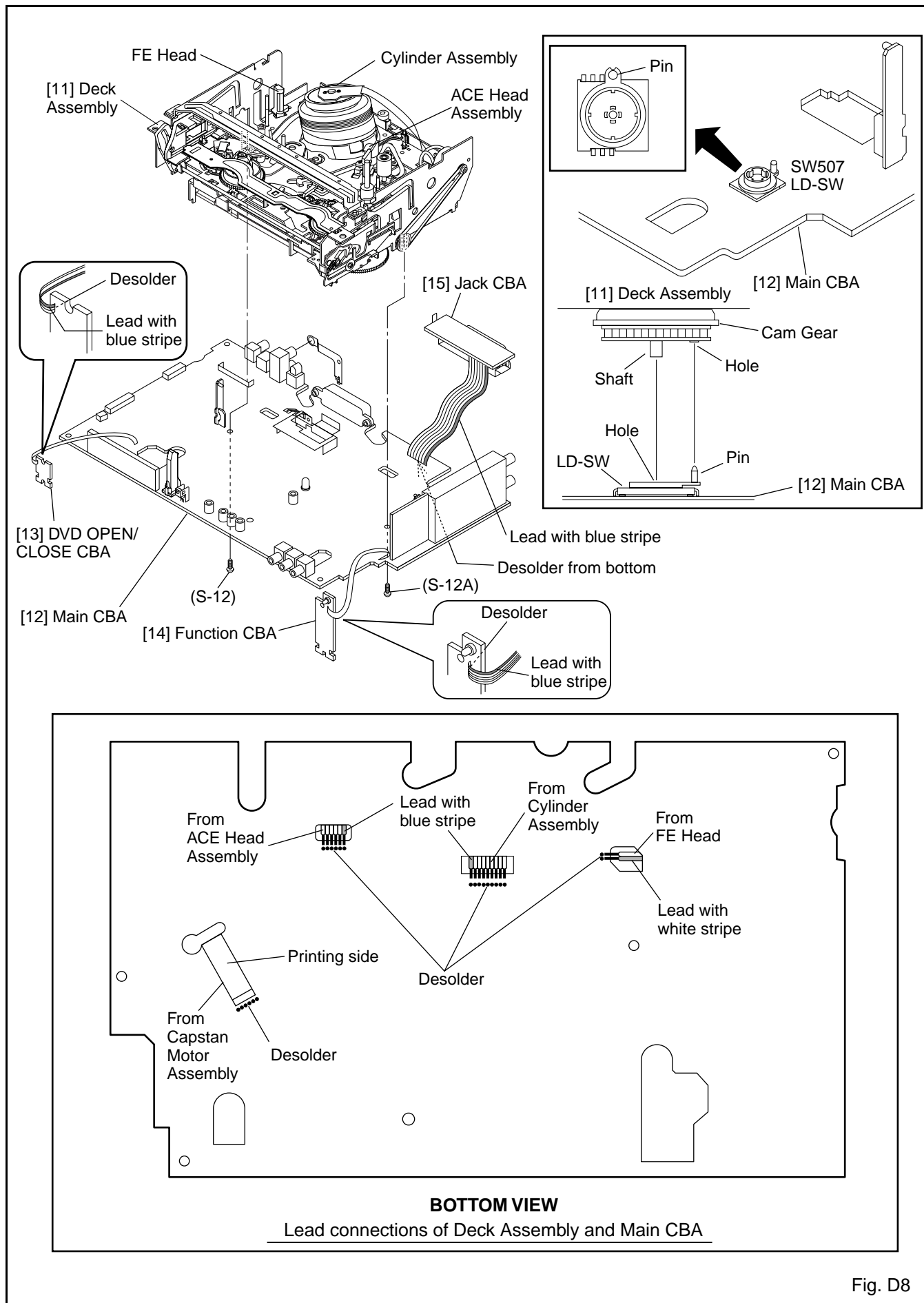
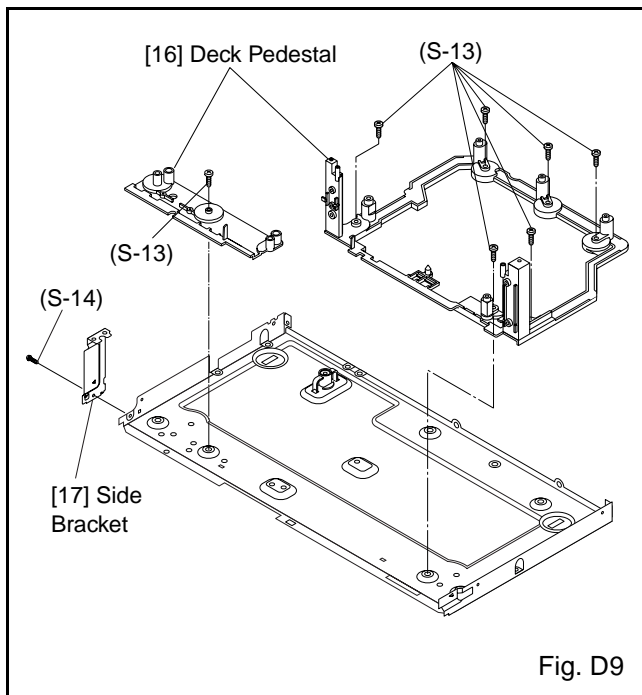
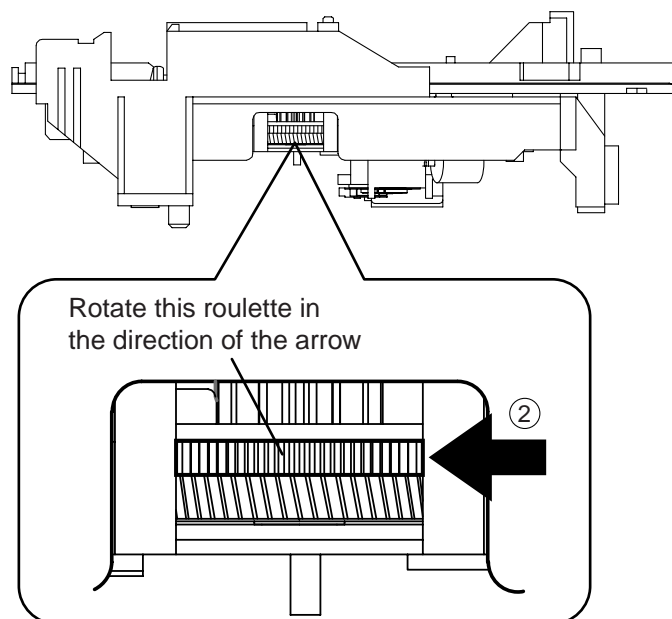
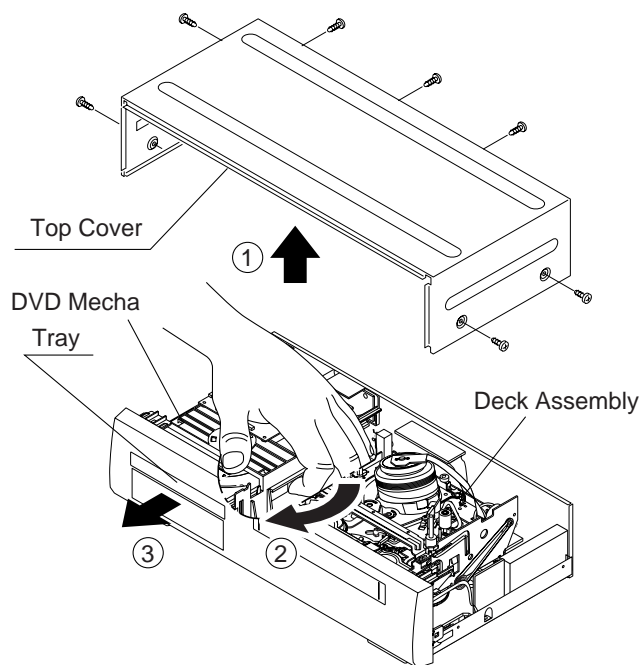


Fig. D8



## To Remove the Disc Manually

1. Remove the Top Cover.
2. Rotate this roulette in the direction of the arrow as shown below.



# ELECTRICAL ADJUSTMENT INSTRUCTIONS

**General Note:** "CBA" is an abbreviation for "Circuit Board Assembly."

**NOTE:**

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either "CHANNEL ▼" or "CHANNEL ▲" button on the front panel first, then the "PLAY" button on the front panel.

## Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe,  
V-Range: 0.001~50V/Div.,  
F-Range: DC~AC-20MHz
2. Alignment Tape (FL6A)

## Head Switching Position Adjustment

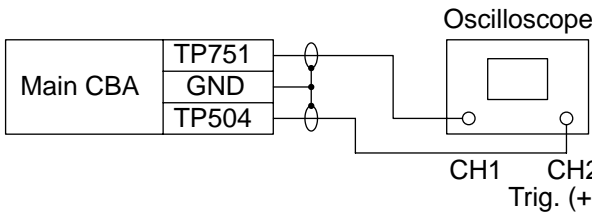
**Purpose:**

To determine the Head Switching point during playback.

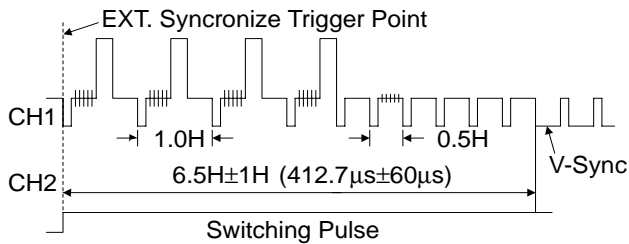
**Symptom of Misadjustment:**

May cause Head Switching noise or vertical jitter in the picture.

Test point	Adj.Point	Mode	Input
TP751(V-OUT) TP504(RF-SW) GND	VR501 (Switching Point) (MAIN CBA)	PLAY (SP)	-----
Tape	Measurement Equipment	Spec.	
FL6A	Oscilloscope	6.5H±1H (412.7μs±60μs)	

Connections of Measurement Equipment			
			

**Figure 1**



**Reference Notes:**

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H(412.7µs) delayed position from the rising edge of the CH2 head switching pulse waveform.

# FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD player into version up mode, press [9], [8], [7], [6], and [SEARCH MODE] buttons on the remote control unit in that order. The tray will open automatically.  
Fig. a appears on the screen and Fig. b appears on the VFD.

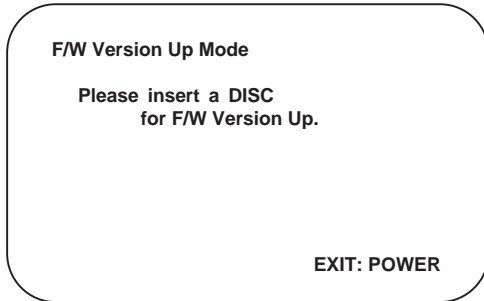


Fig. a Version Up Mode Screen

bE-UP

Fig. b VFD in Version Up Mode

The DVD player can also enter the version up mode with the tray open. In this case, Fig. a will be shown on the screen while the tray is open.

3. Load the disc for version up.
4. The DVD player enters the F/W version up mode automatically. Fig. c appears on the screen and Fig. d appears on the VFD.

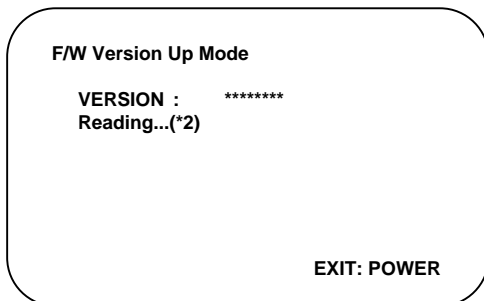


Fig. c Programming Mode Screen

1.223

Fig. d VFD in Programming Mode (Example)

The appearance shown in (\*2) of Fig. c is described as follows:

No.	Appearance	State
1	Reading...	Sending files into the memory
2	Erasing...	Erasing previous version data
3	Programming...	Writing new version data

5. After programming is finished, the tray opens automatically. Fig. e appears on the screen and the checksum in (\*3) of Fig. e appears on the VFD. (Fig. f)

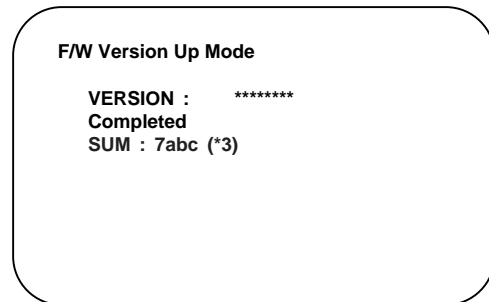


Fig. e Completed Program Mode Screen

7AbC

Fig. f VFD upon Finishing the Programming Mode (Example)

At this time, no buttons are available.

6. Unplug the AC cord from the AC outlet. Then plug it again.
7. Turn the power on by pressing the power button and the tray will close.
8. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.  
Fig. g appears on the screen.

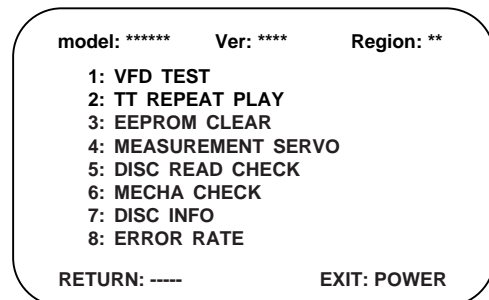


Fig. g

9. Press [3] button on the remote control unit.  
Fig. h appears on the screen.

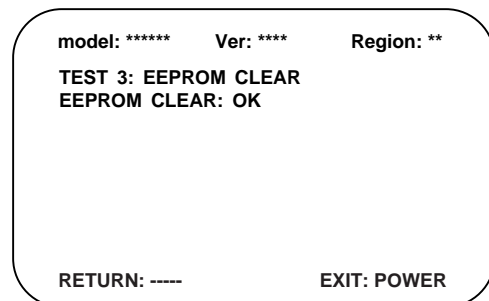
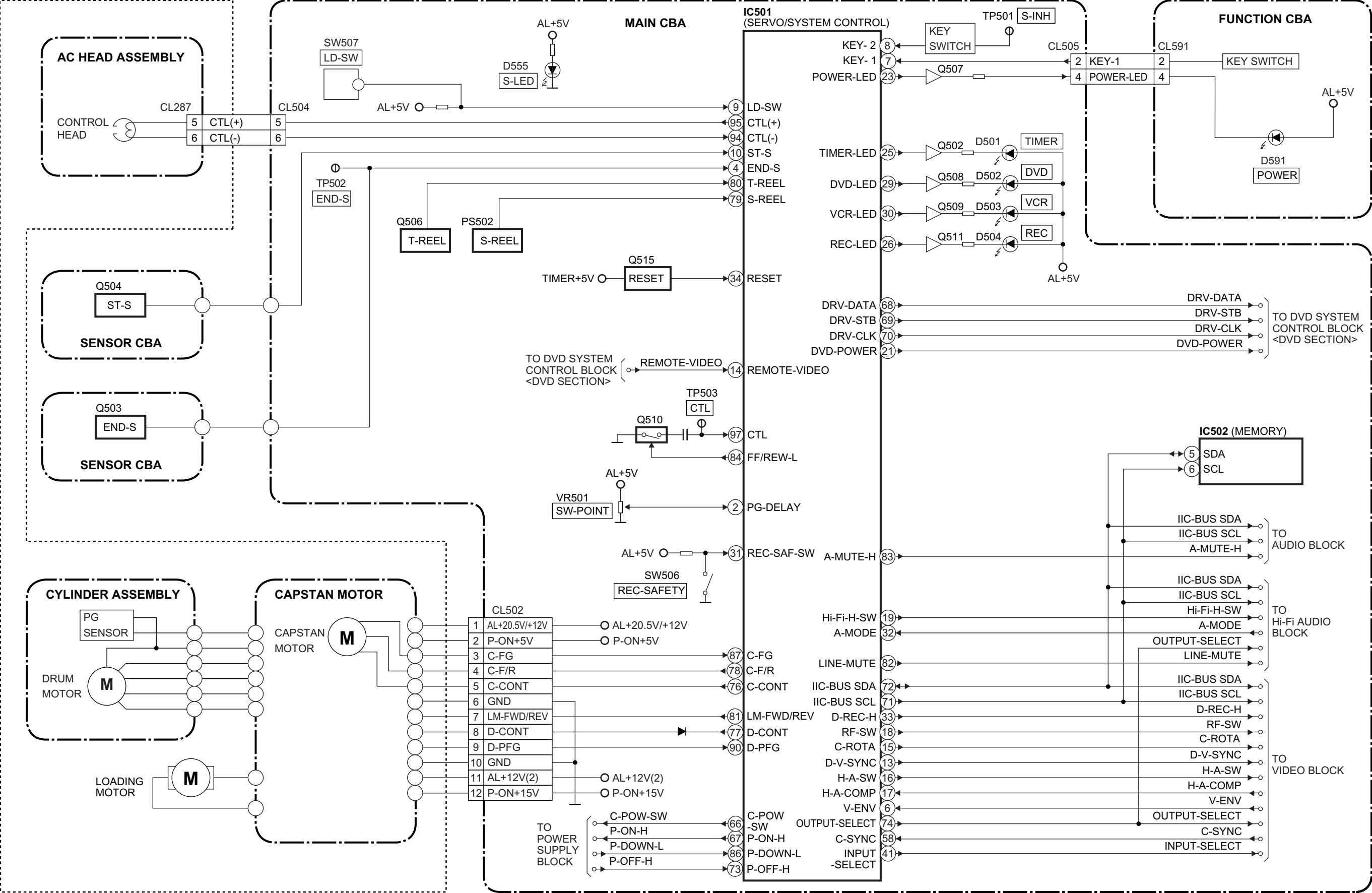


Fig. h

10. To finish this mode, press [POWER] button.

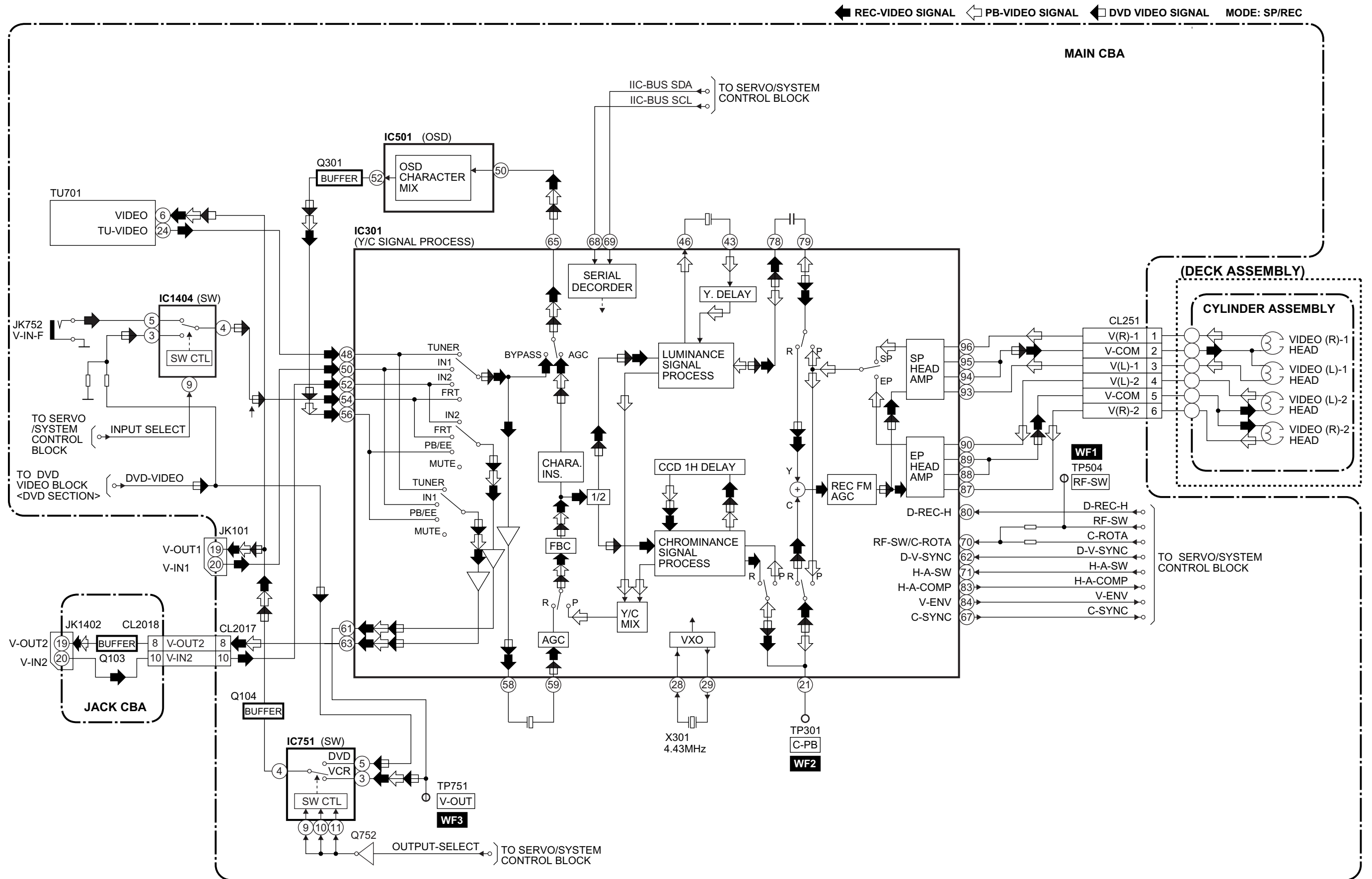
Servo/System Control Block Diagram

(DECK ASSEMBLY)



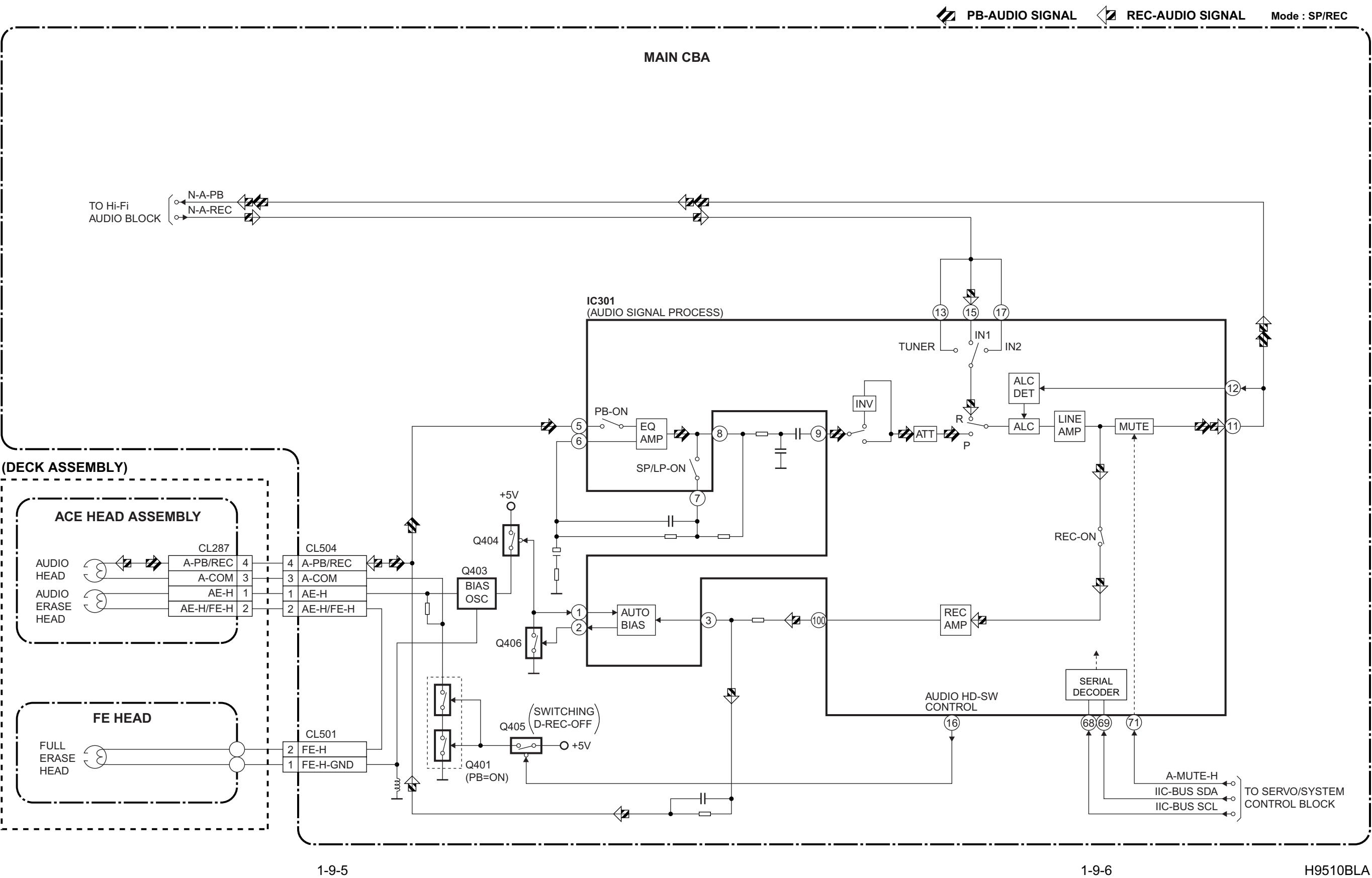


## Video Block Diagram

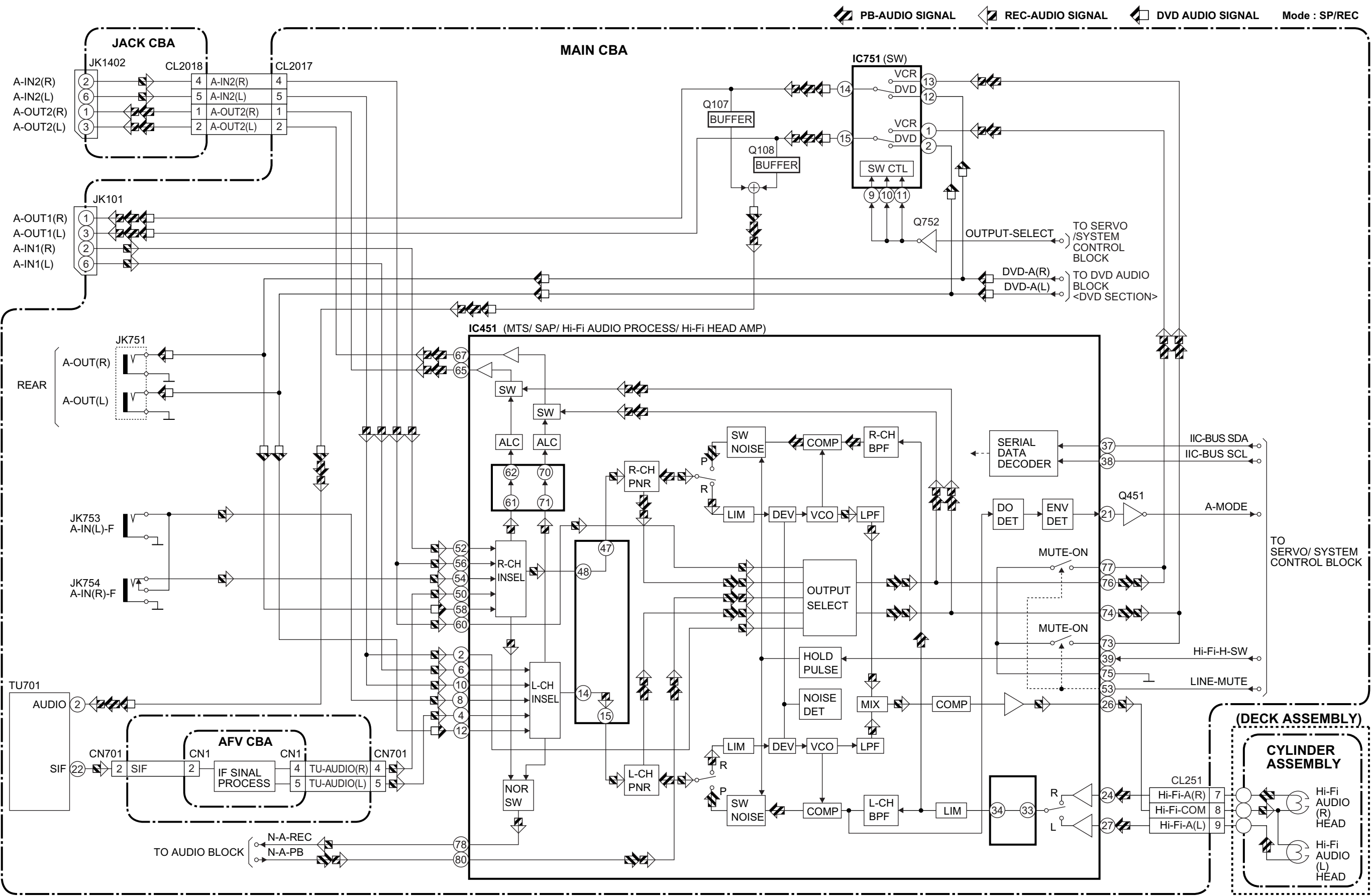




Audio Block Diagram



Hi-Fi Audio Block Diagram



## Power Supply Block Diagram

NOTE :

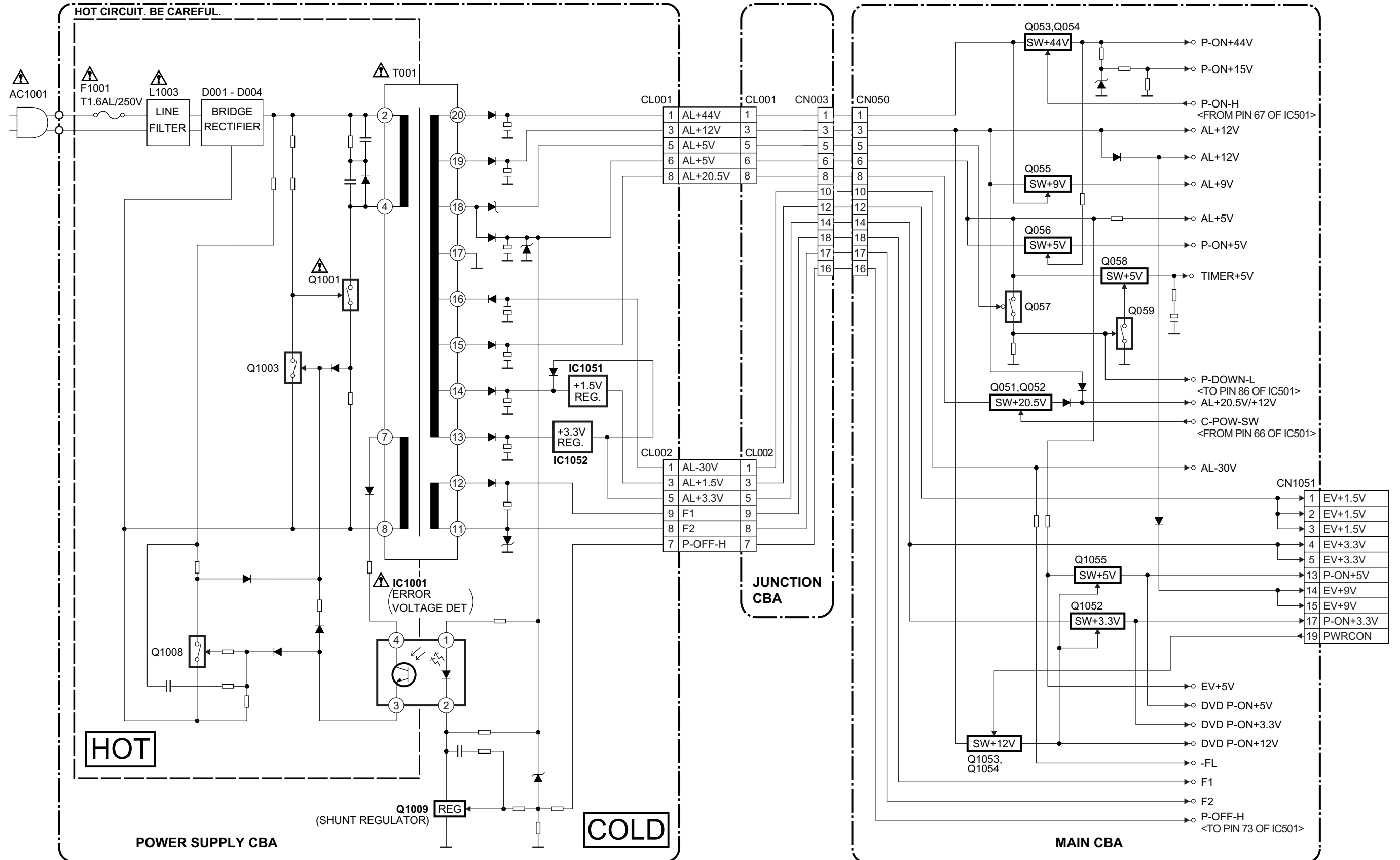
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

### CAUTION

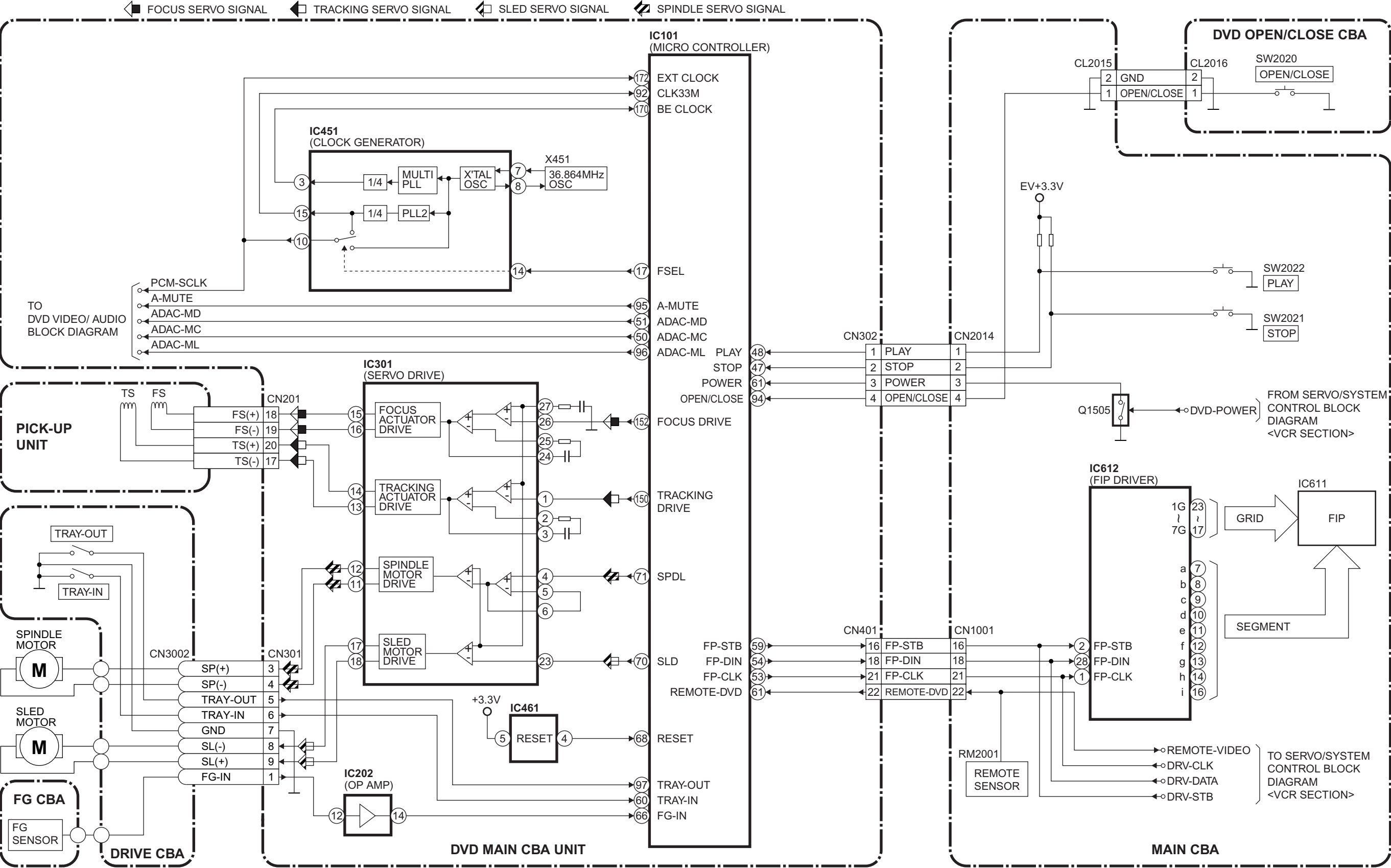
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
REPLACE ONLY WITH THE SAME TYPE T1.6AL/250V FUSE.

**CAUTION !**

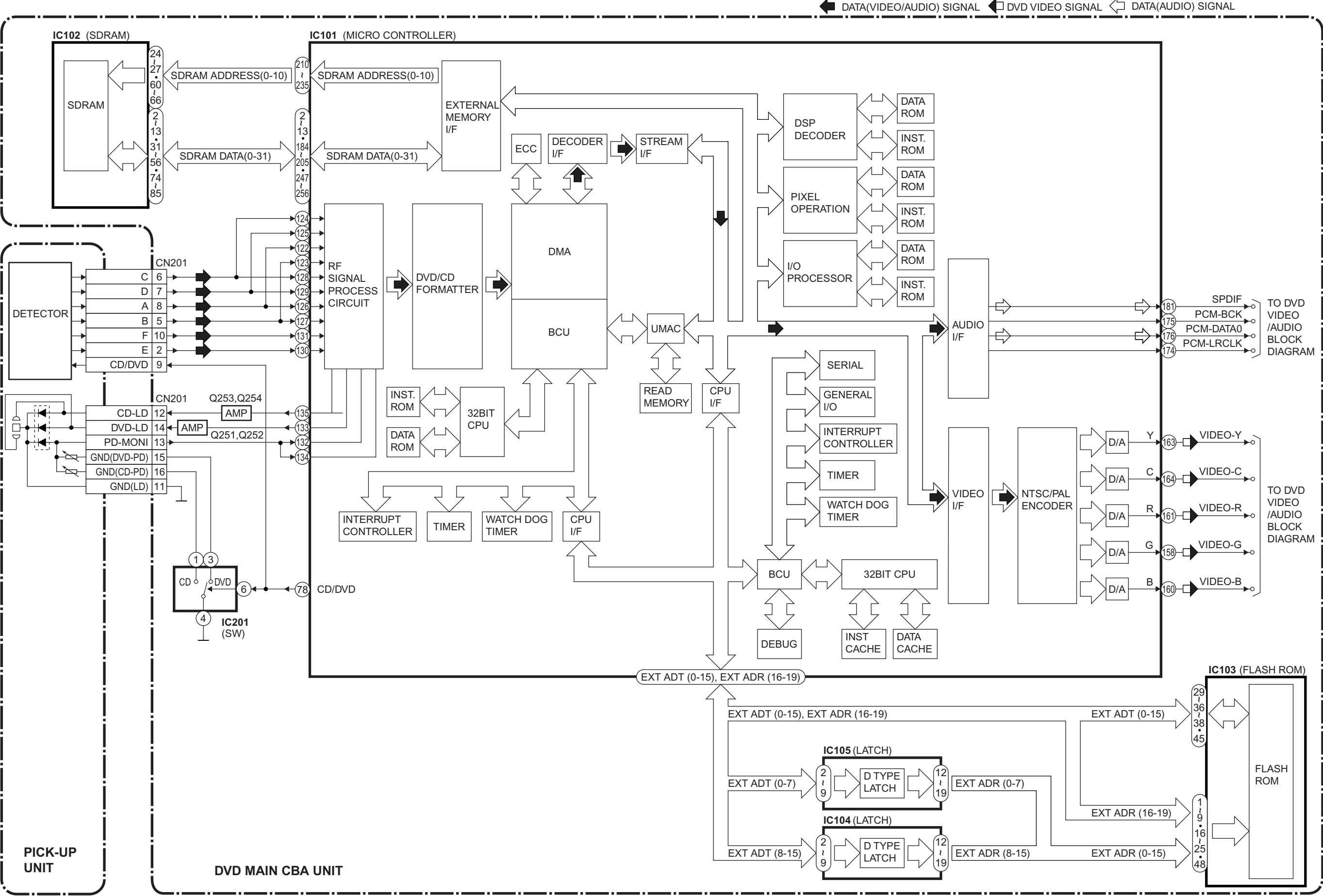
Fixed voltage (or Auto voltage selectable ) power supply circuit is used in this unit. If Main Fuse (F001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



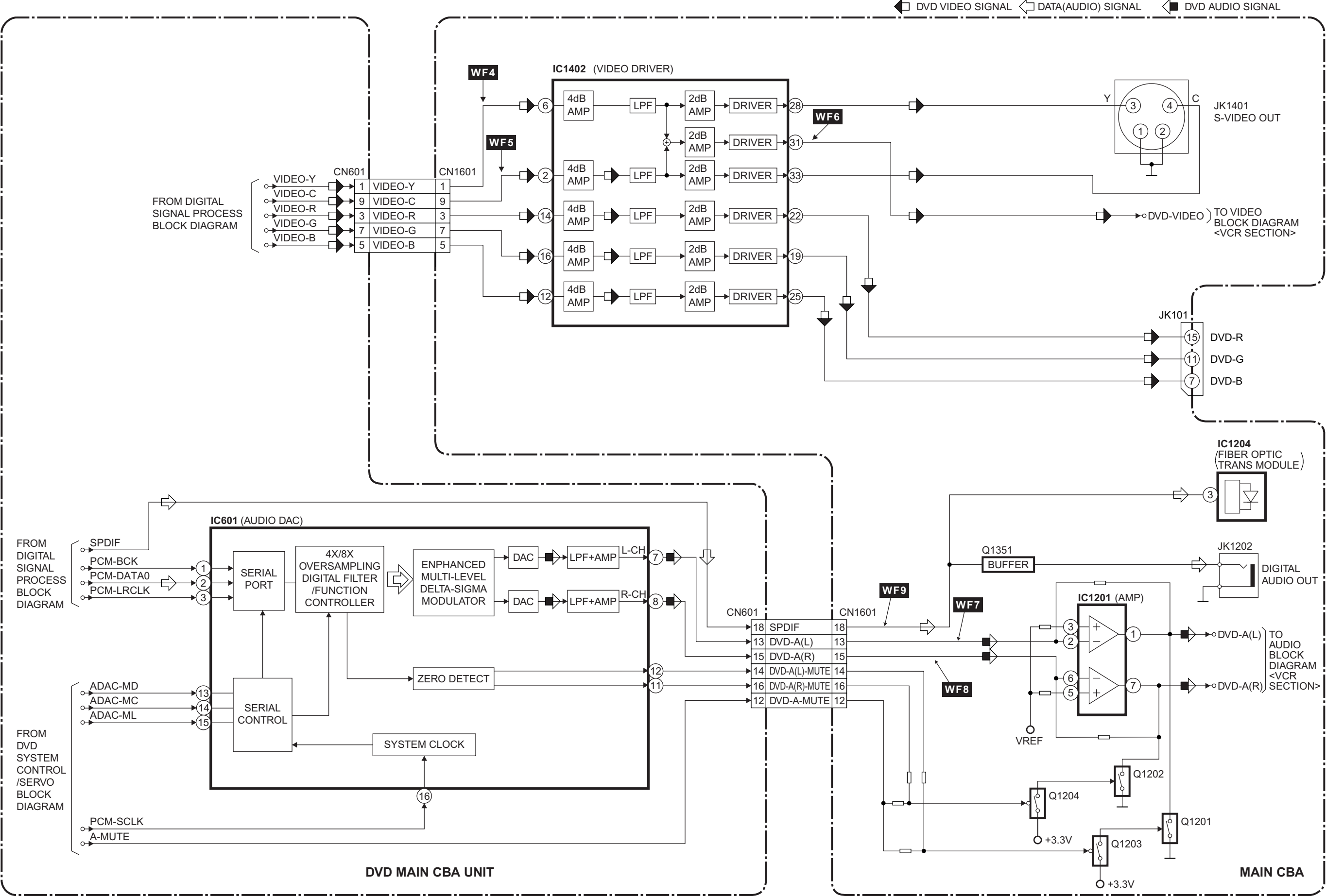
DVD System Control/Servo Block Diagram



Digital Signal Process Block Diagram



DVD Video / Audio Block Diagram



# SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

## Standard Notes

### WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

### Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ( $K=10^3$ ,  $M=10^6$ ).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in  $\mu F$  ( $P=10^{-6} \mu F$ ).
5. All voltages are DC voltages unless otherwise specified.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

## LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

### 1. CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

### 2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

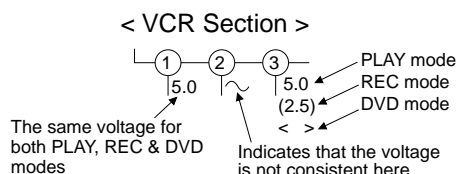
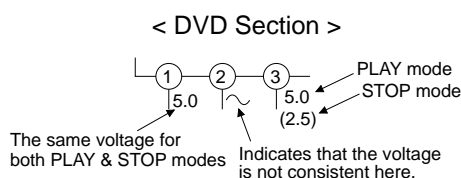
### 3. Note:

- (1) Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
- (2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

### 4. Wire Connectors

- (1) Prefix symbol "CN" means "connector" (can disconnect and reconnect).
- (2) Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).

5. Voltage indications for PLAY and REC modes on the schematics are as shown below:



Unit: Volts

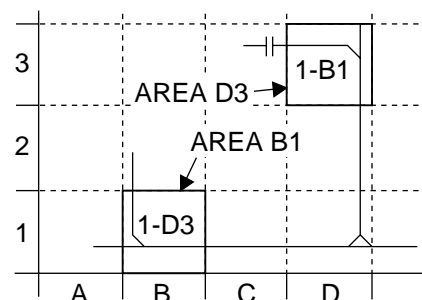
### 6. How to read converged lines

1-D3  

 Distinction Area  
 Line Number  
 (1 to 3 digits)

Examples:

1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".

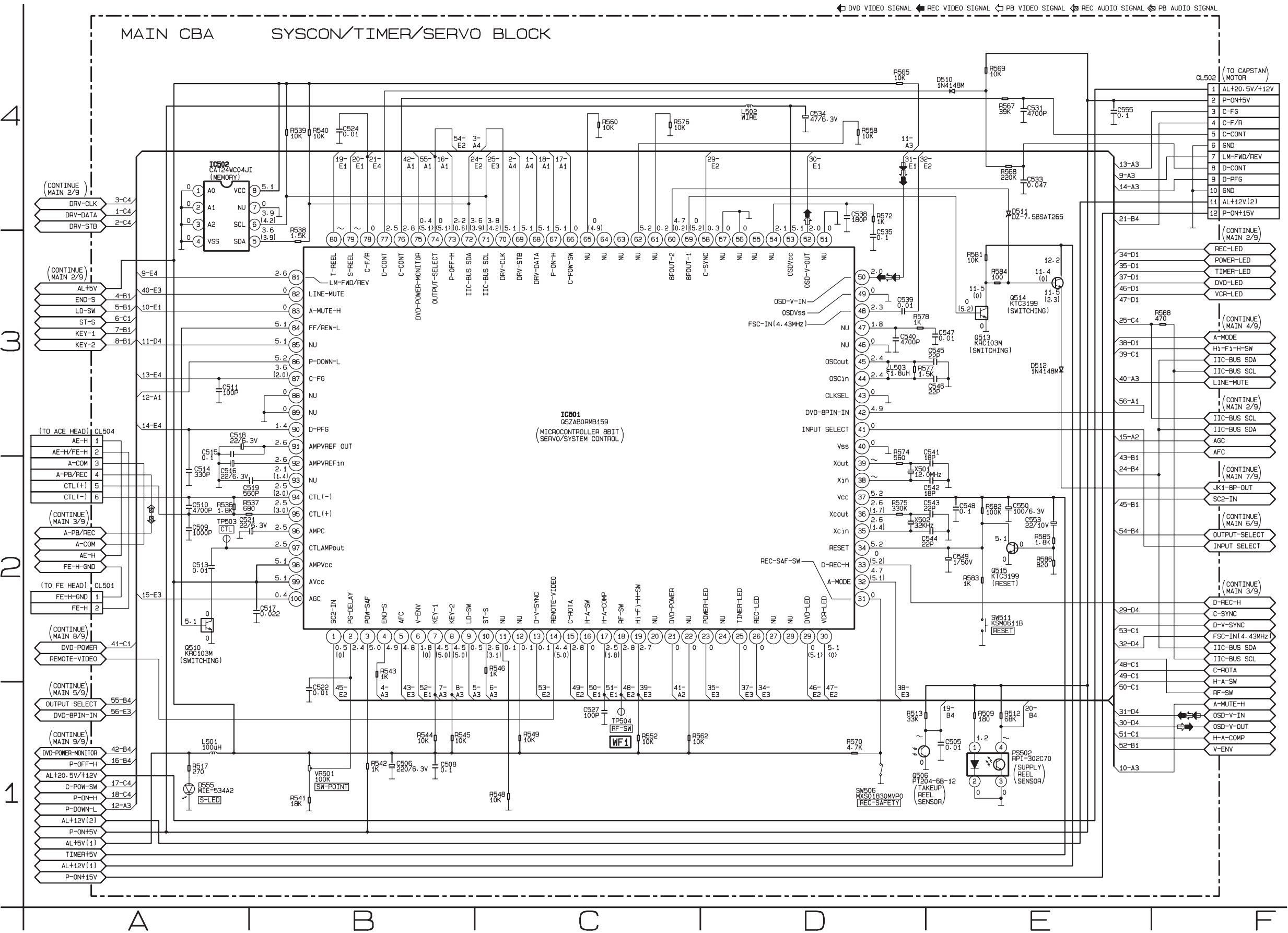


### 7. Test Point Information

- : Indicates a test point with a jumper wire across a hole in the PCB.
- : Used to indicate a test point with a component lead on foil side.
- : Used to indicate a test point with no test pin.
- : Used to indicate a test point with a test pin.

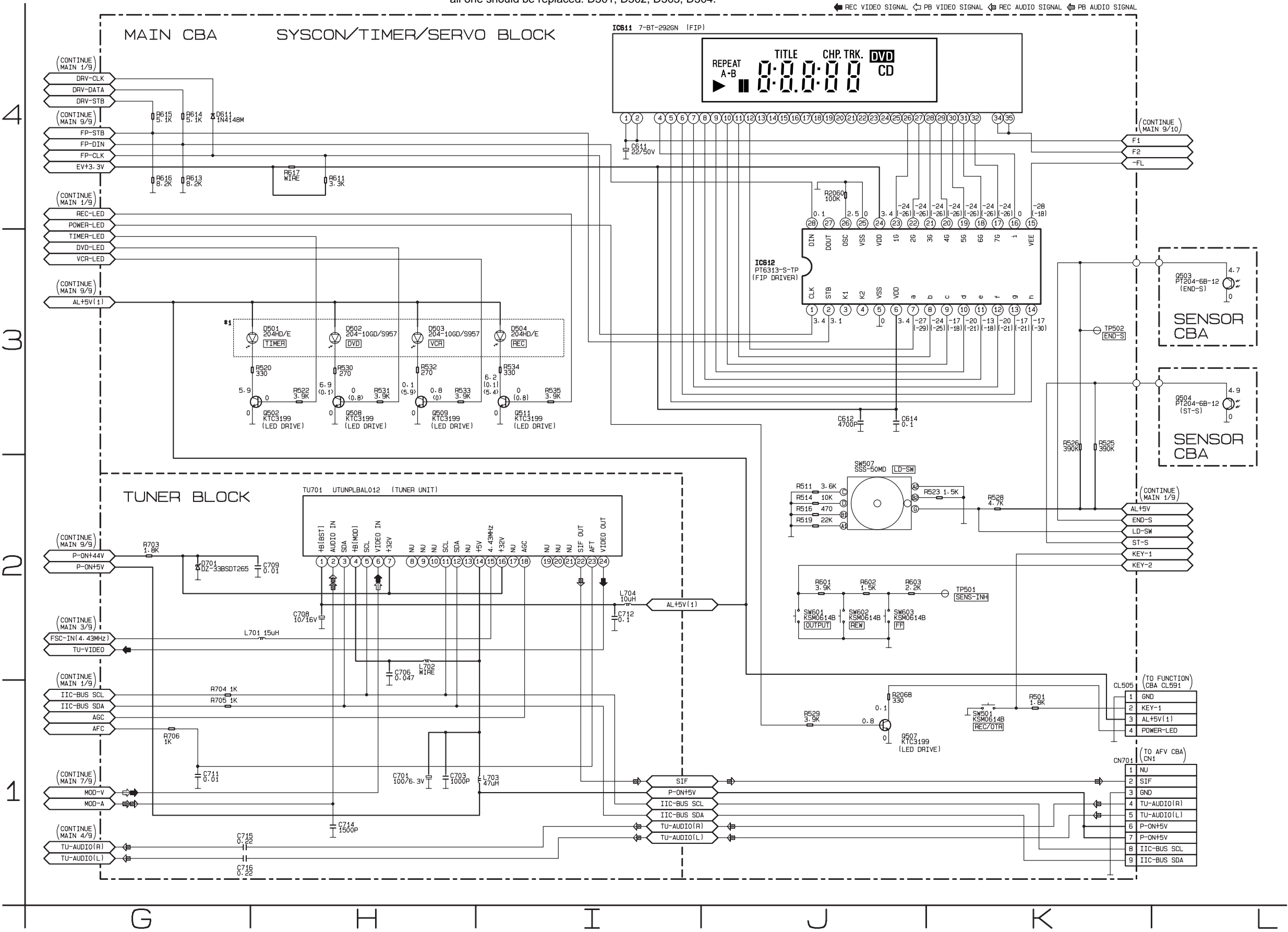


Main 1/9 Schematic Diagram < VCR Section >



Main 2/9 & Sensor Schematic Diagram < VCR Section >

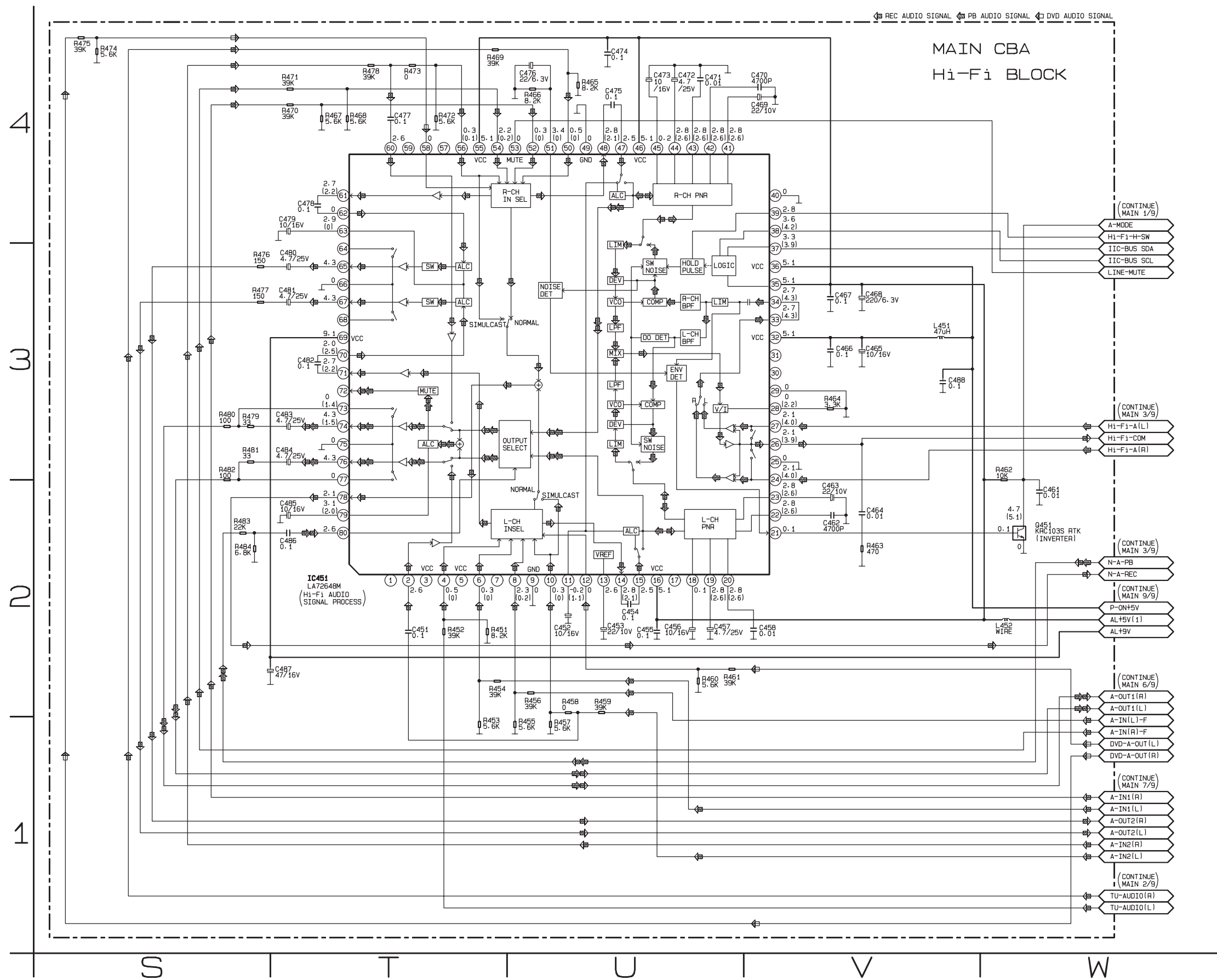
\*1 Note:  
When it is necessary to replace one or more of the following Diodes,  
all one should be replaced: D501, D502, D503, D504.



## 4

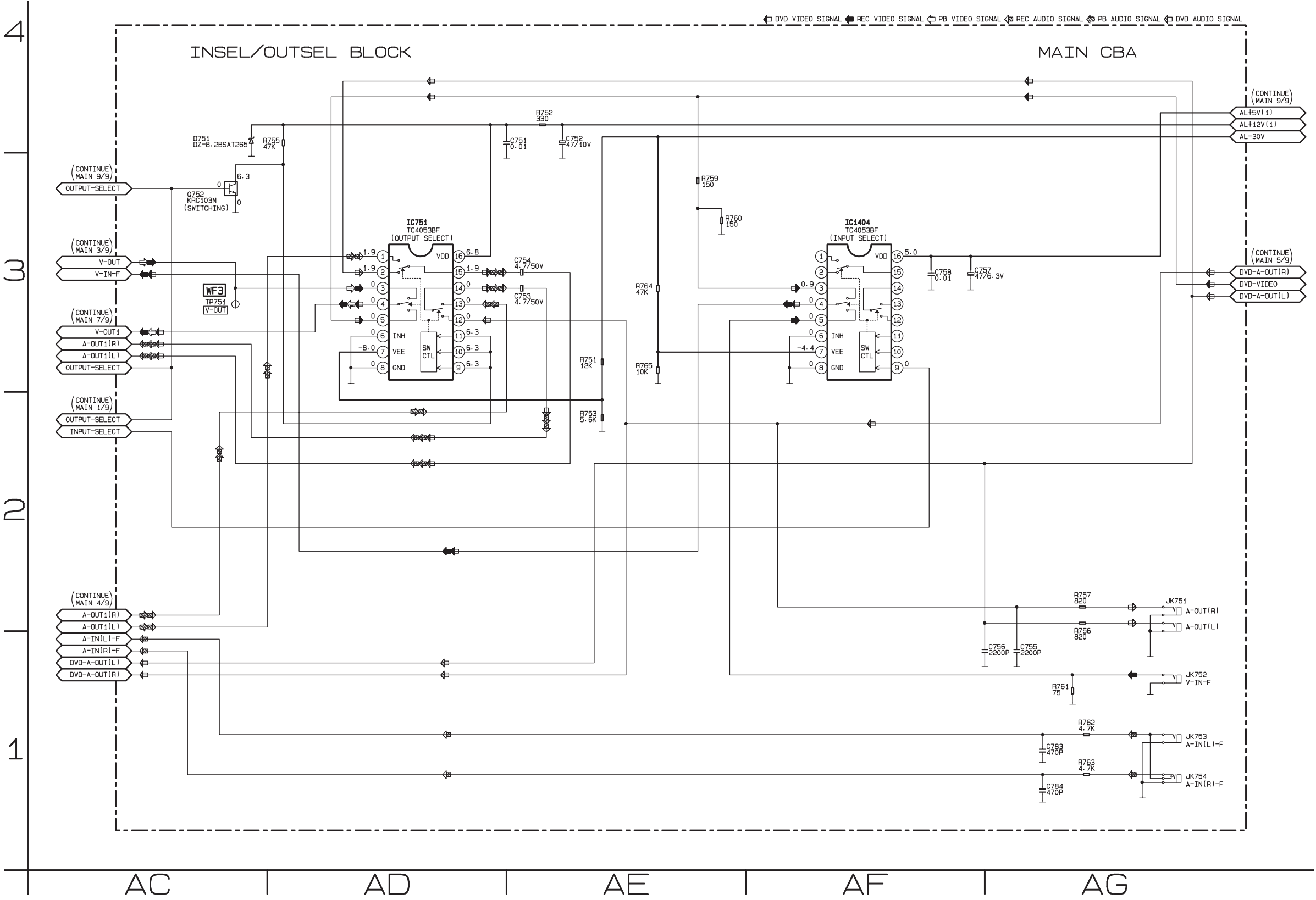


Main 4/9 Schematic Diagram < VCR Section >



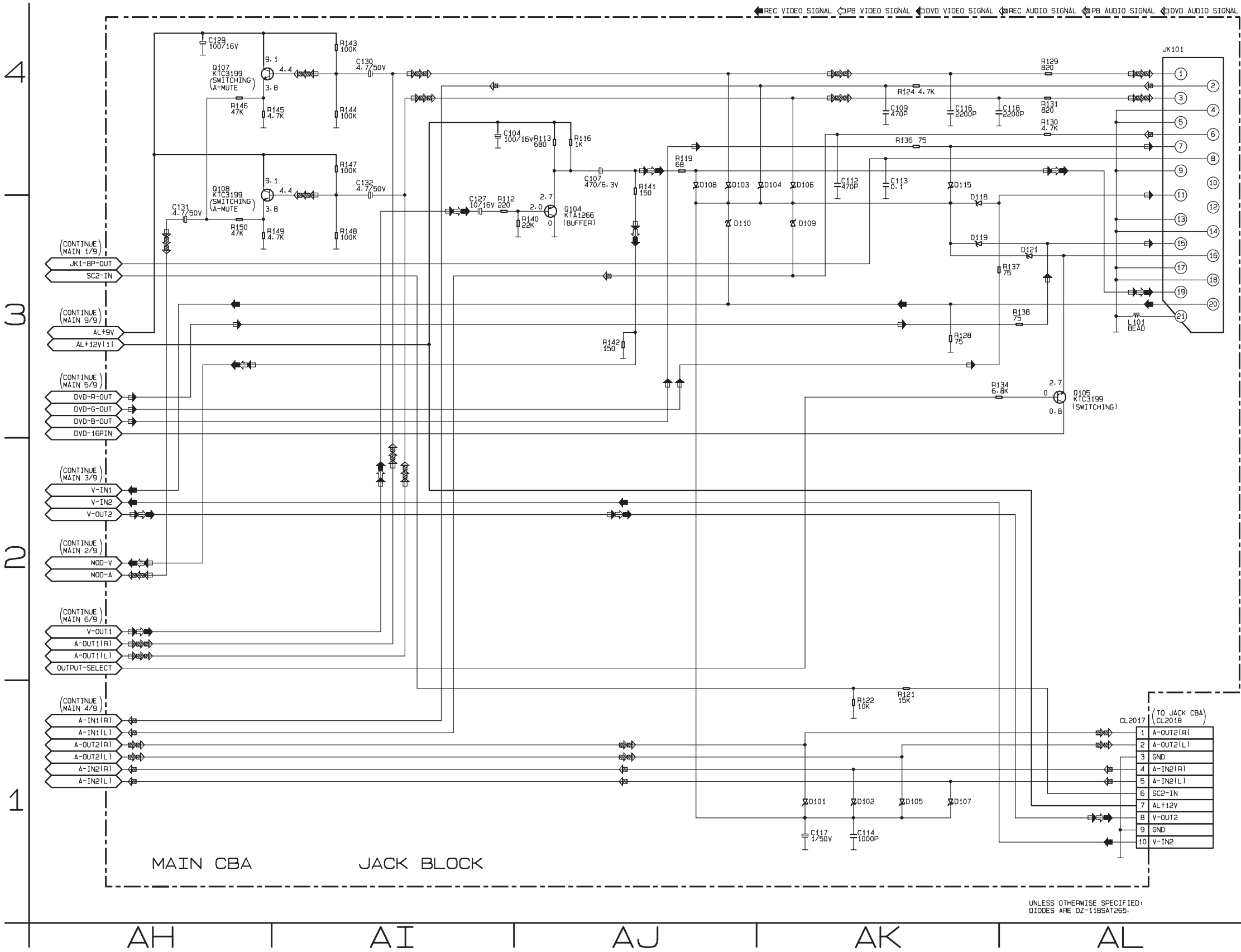


Main 6/9 Schematic Diagram < VCR Section >

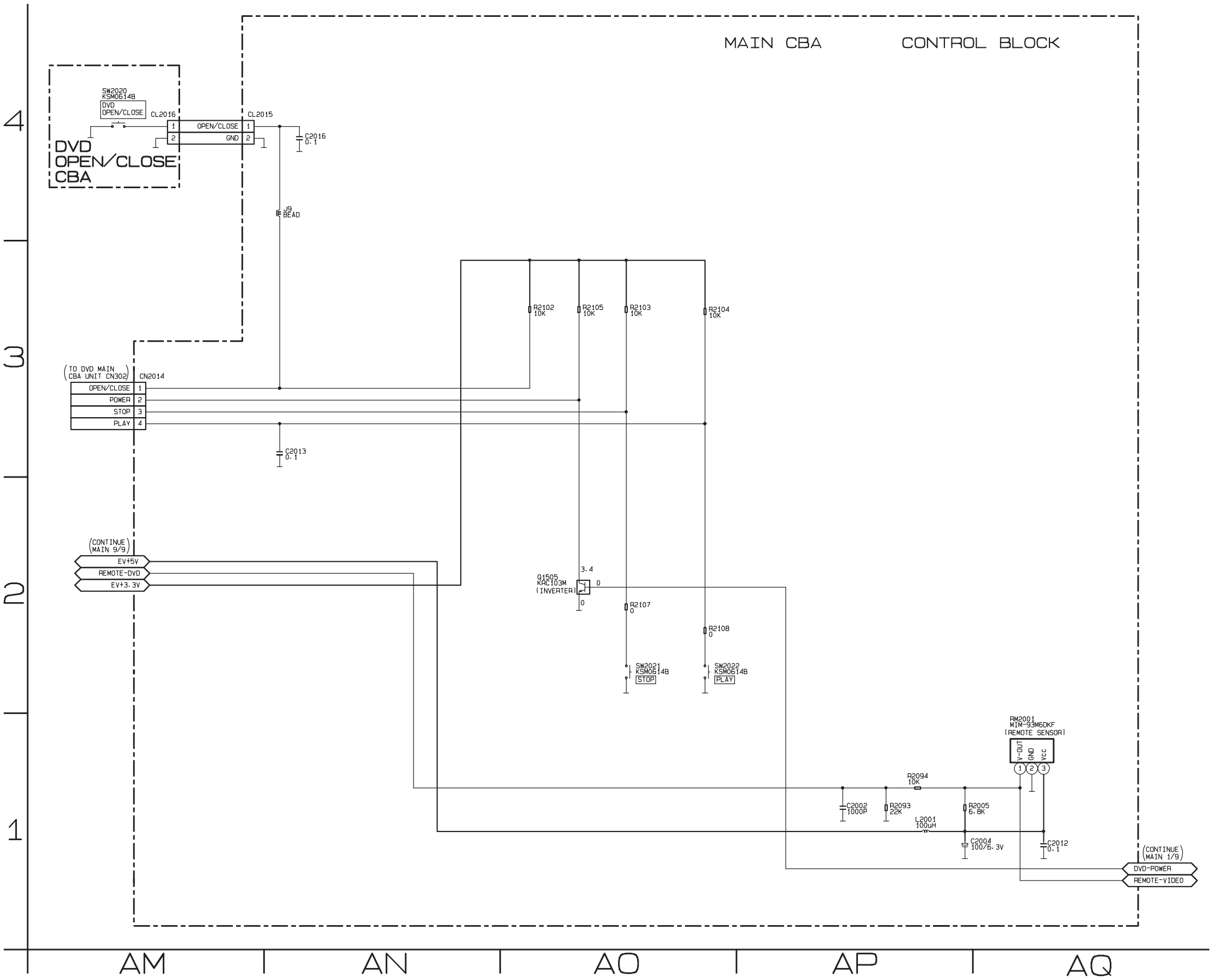




Main 7/9 Schematic Diagram < VCR Section >

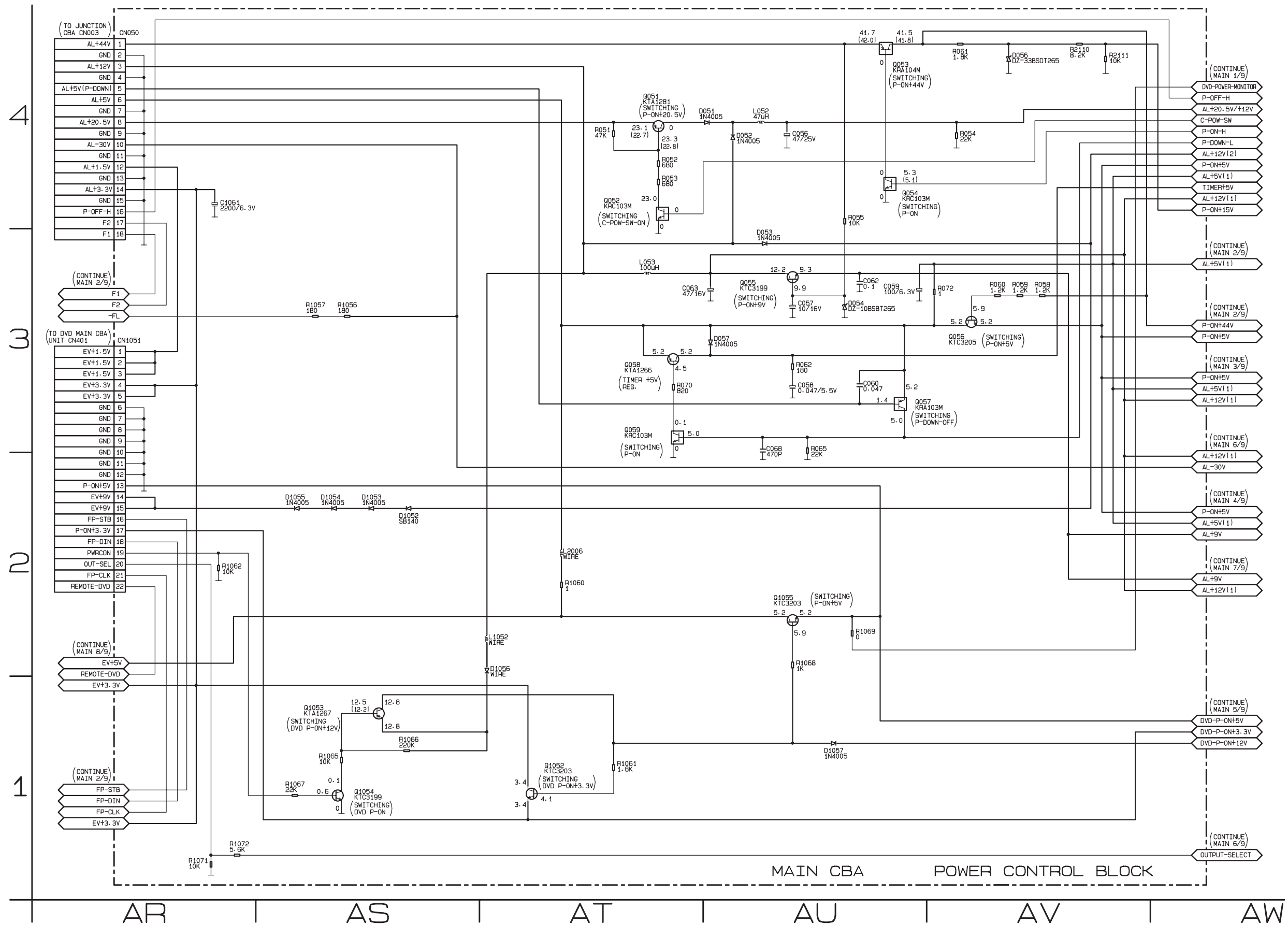


Main 8/9 & DVD Open/ Close Schematic Diagram < VCR Section >





### Main 9/9 Schematic Diagram < VCR Section >

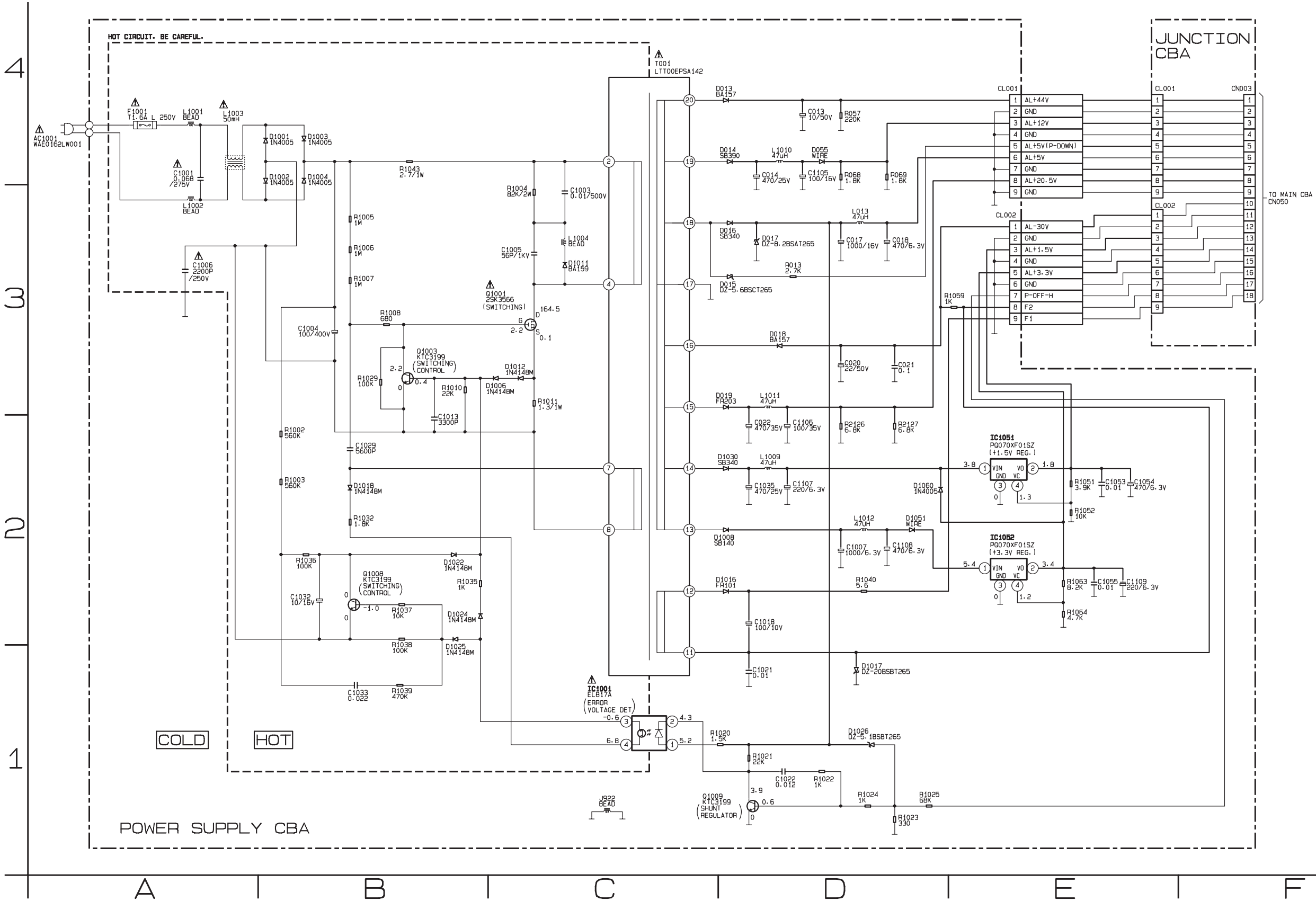


Power Supply & Junction Schematic Diagram < VCR Section >

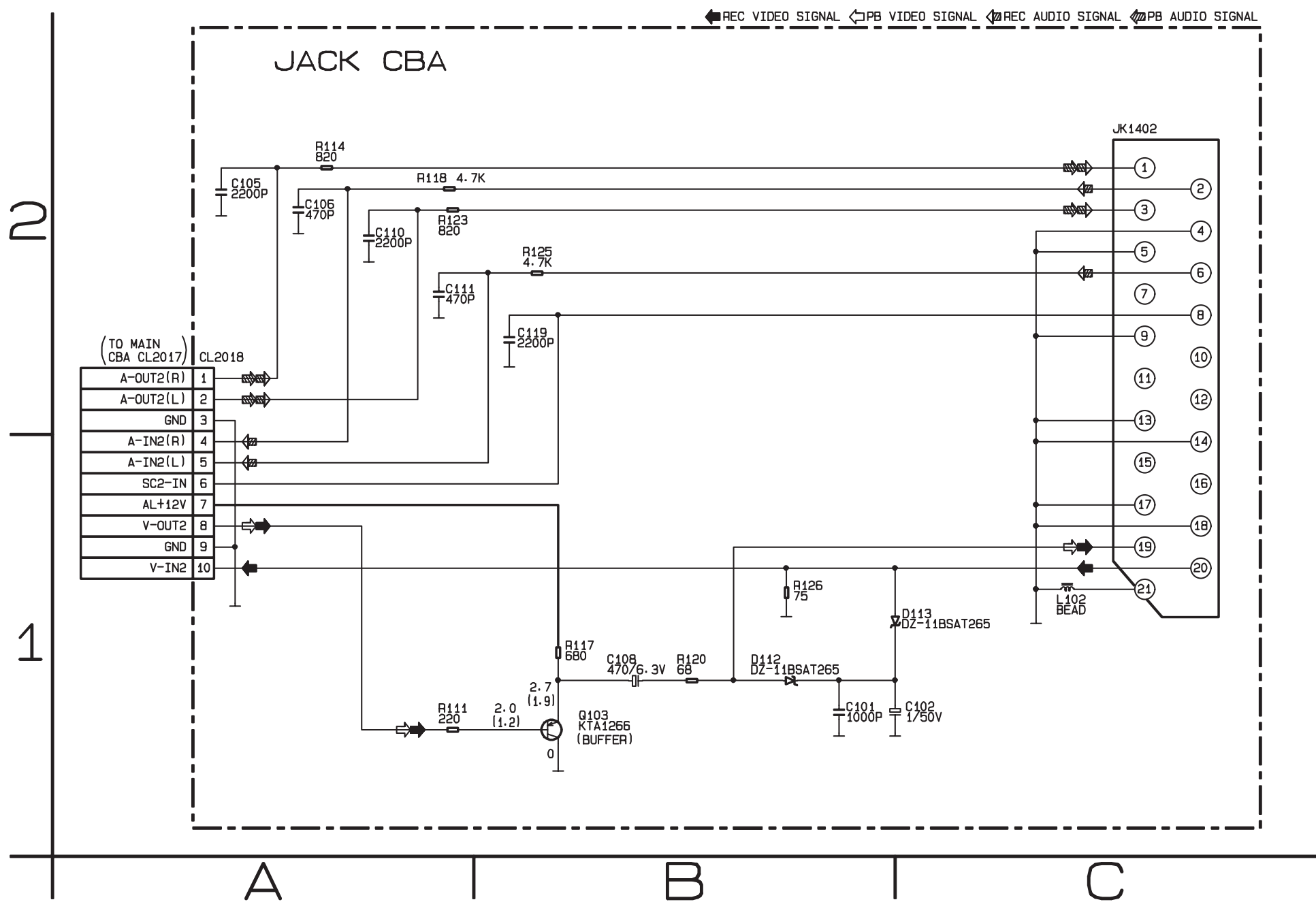
**CAUTION !**  
For continued protection against fire hazard,  
replace only with the same type fuse.

**NOTE :**  
The voltage for parts in hot circuit is measured using  
hot GND as a common terminal.

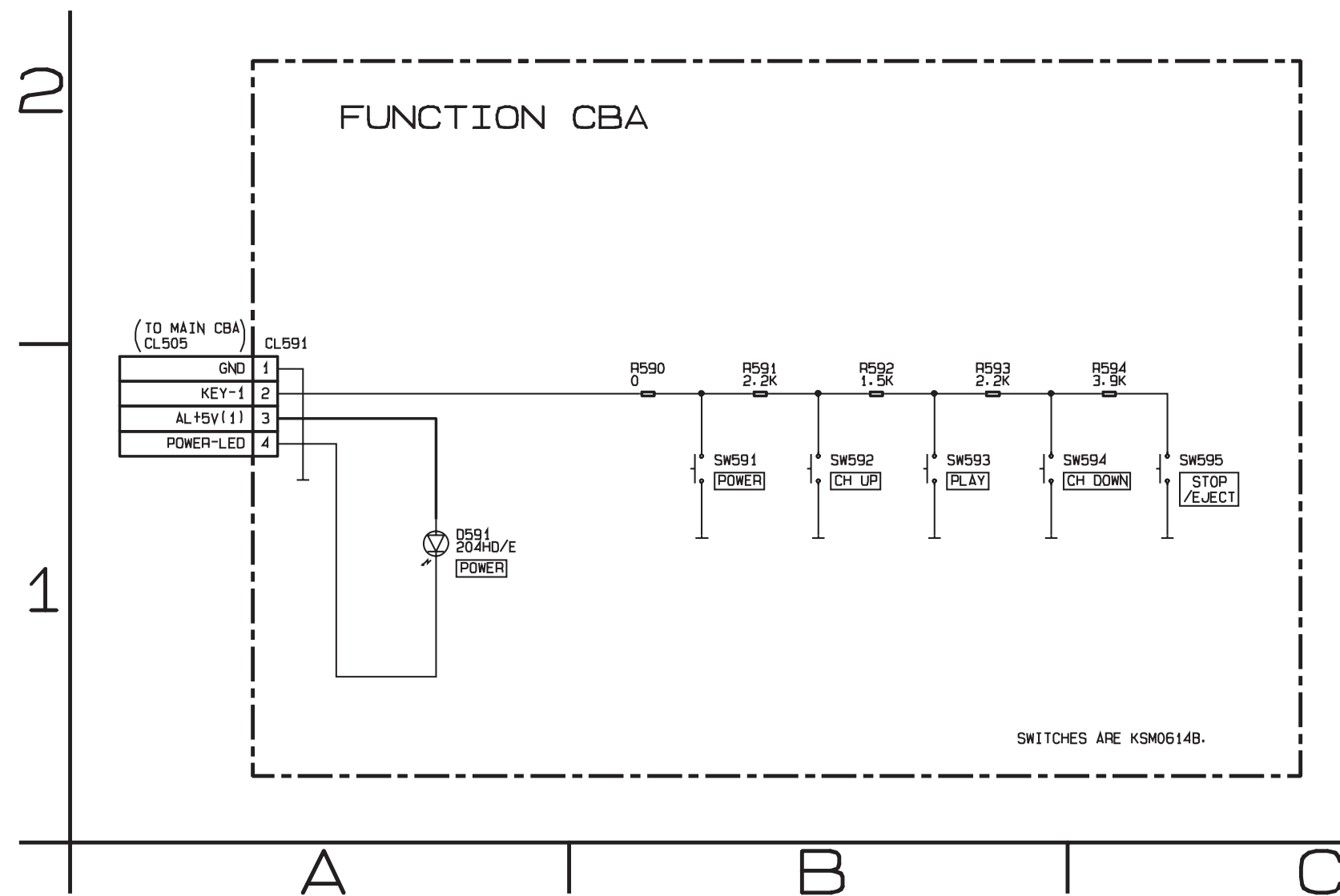
**CAUTION !**  
Fixed voltage ( or Auto voltage selectable ) power supply circuit is used in this unit.  
If Main Fuse (F1001) is blown, check to see that all components in the power supply  
circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.



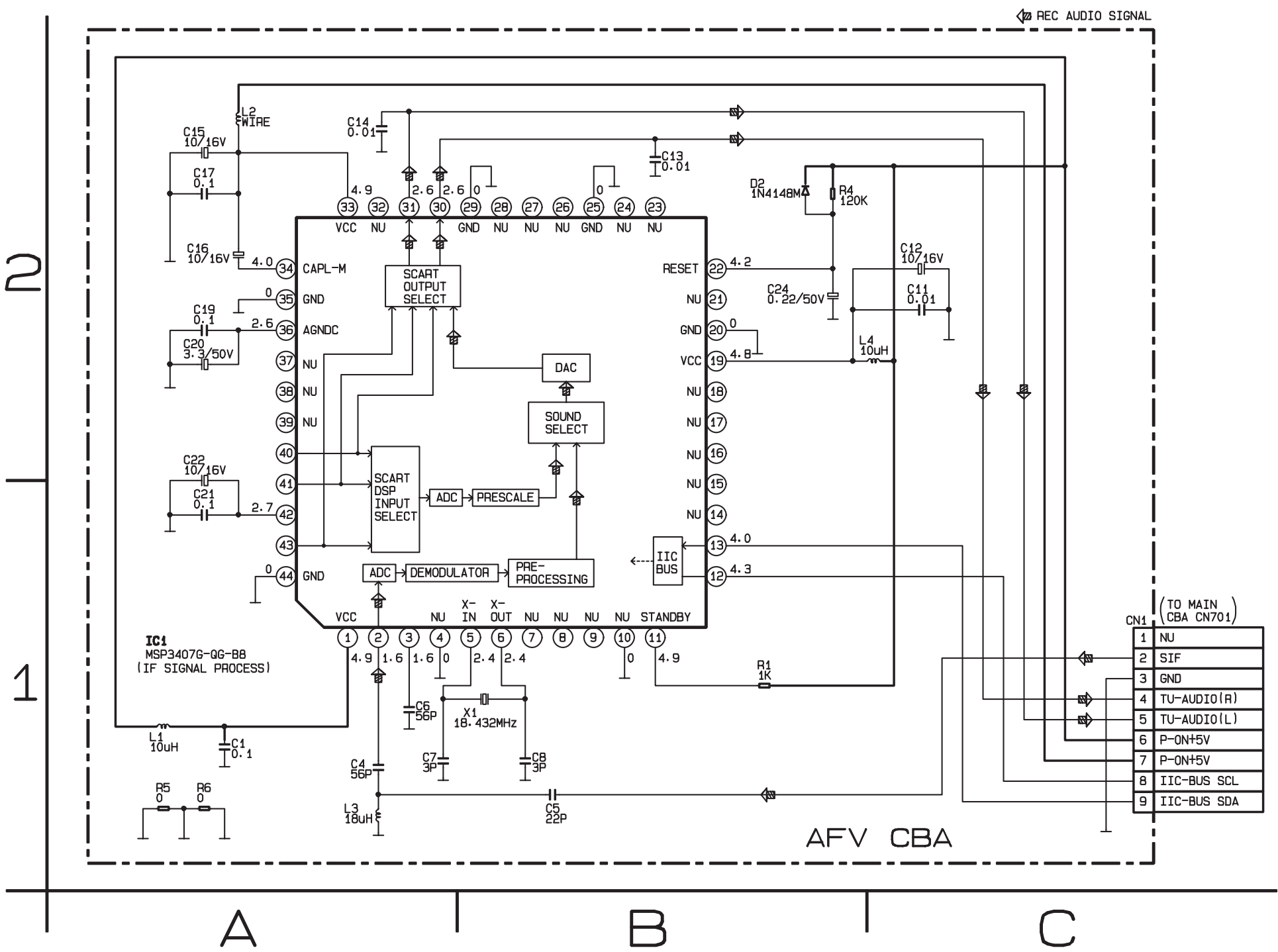
Jack Schematic Diagram < VCR Section >



### Function Schematic Diagram < VCR Section >



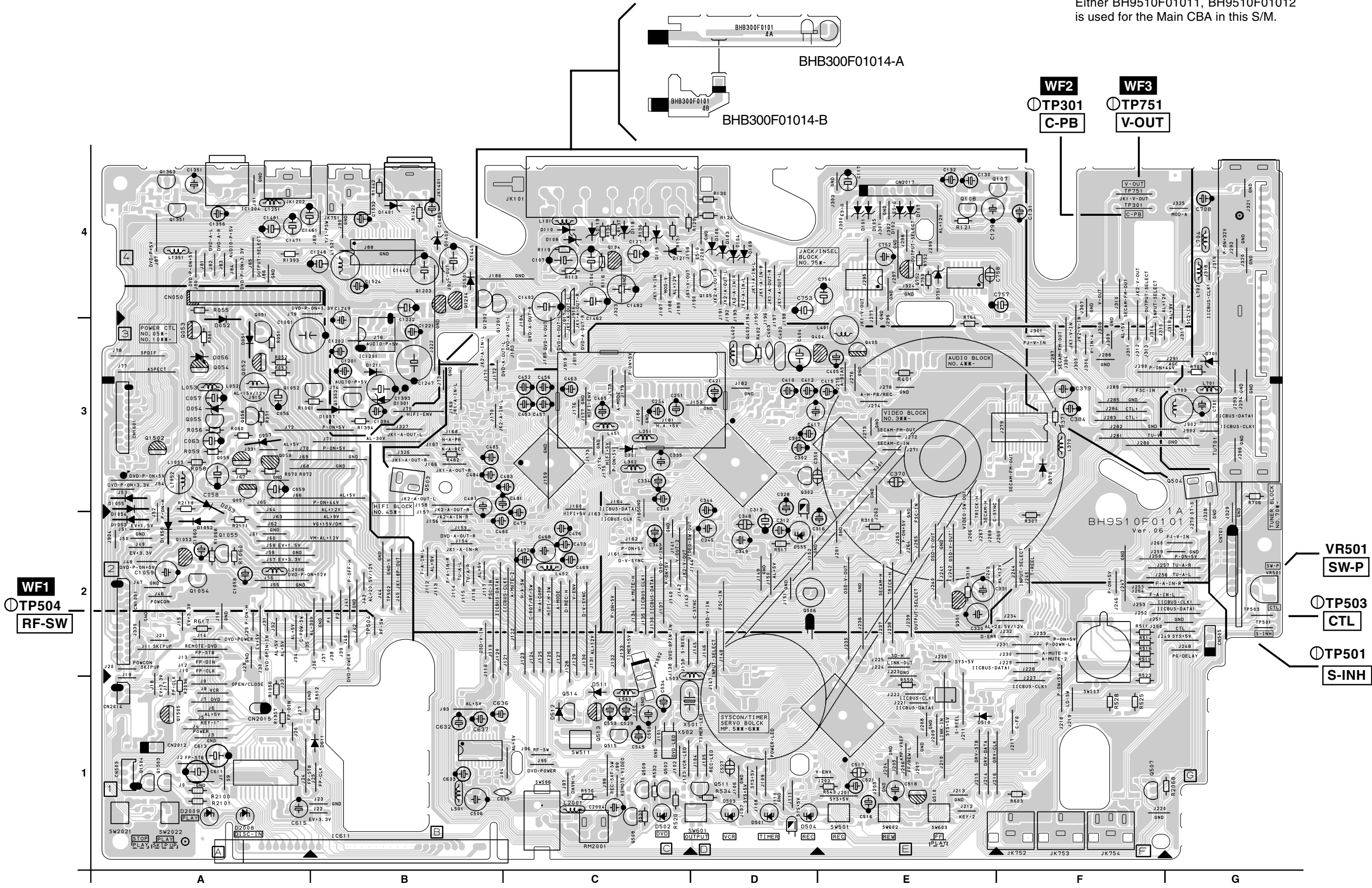
AFV Schematic Diagram < VCR Section >



Main CBA Top View & Sensor CBA Top View

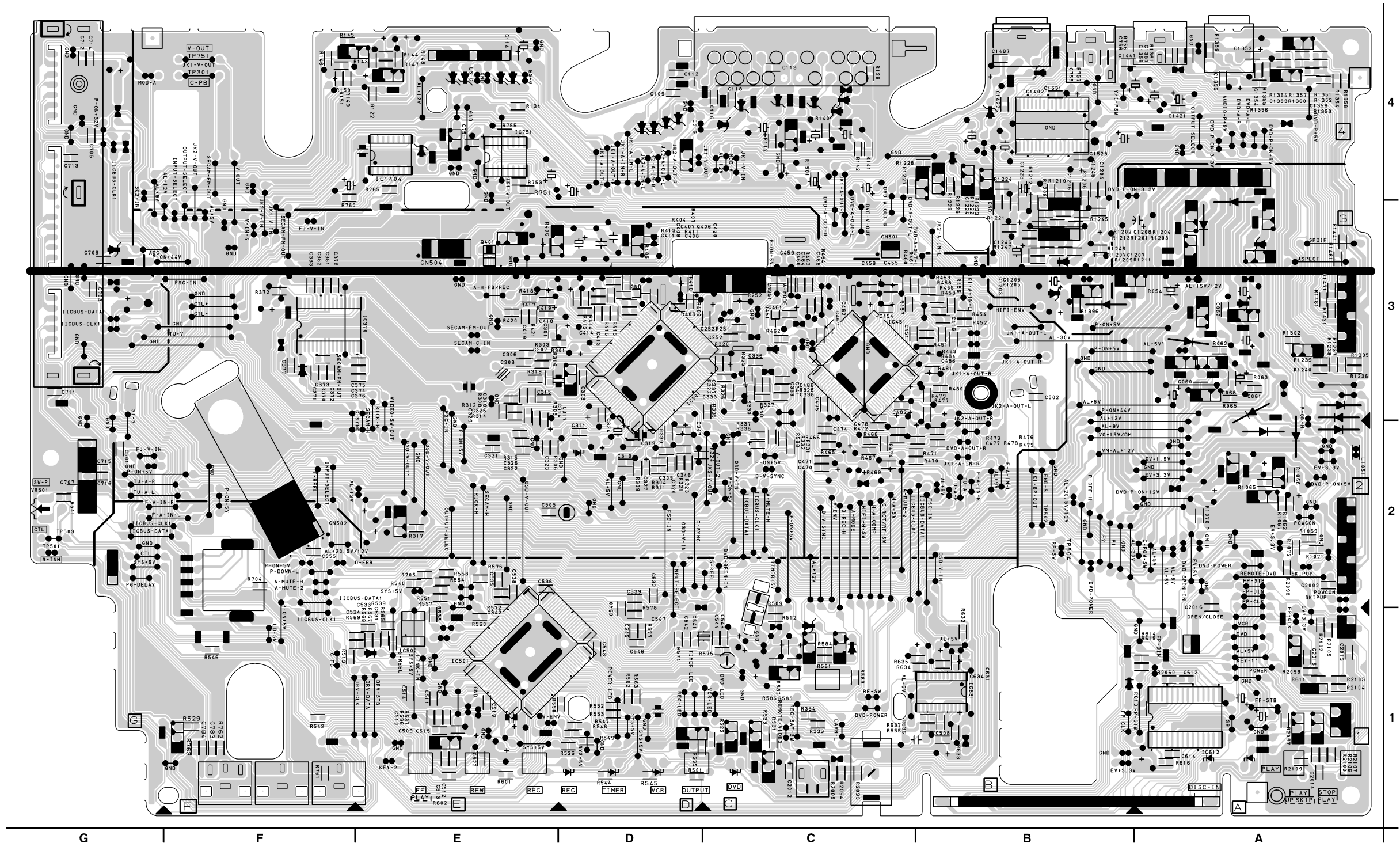
Sensor CBA Top View

NOTE :  
Either BH9510F01011, BH9510F01012  
is used for the Main CBA in this S/M.



### Main CBA Bottom View

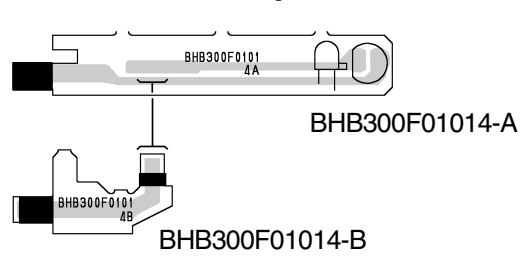
NOTE:  
Either BH9510F01011, BH9510F01012  
is used for the Main CBA in this S/M.



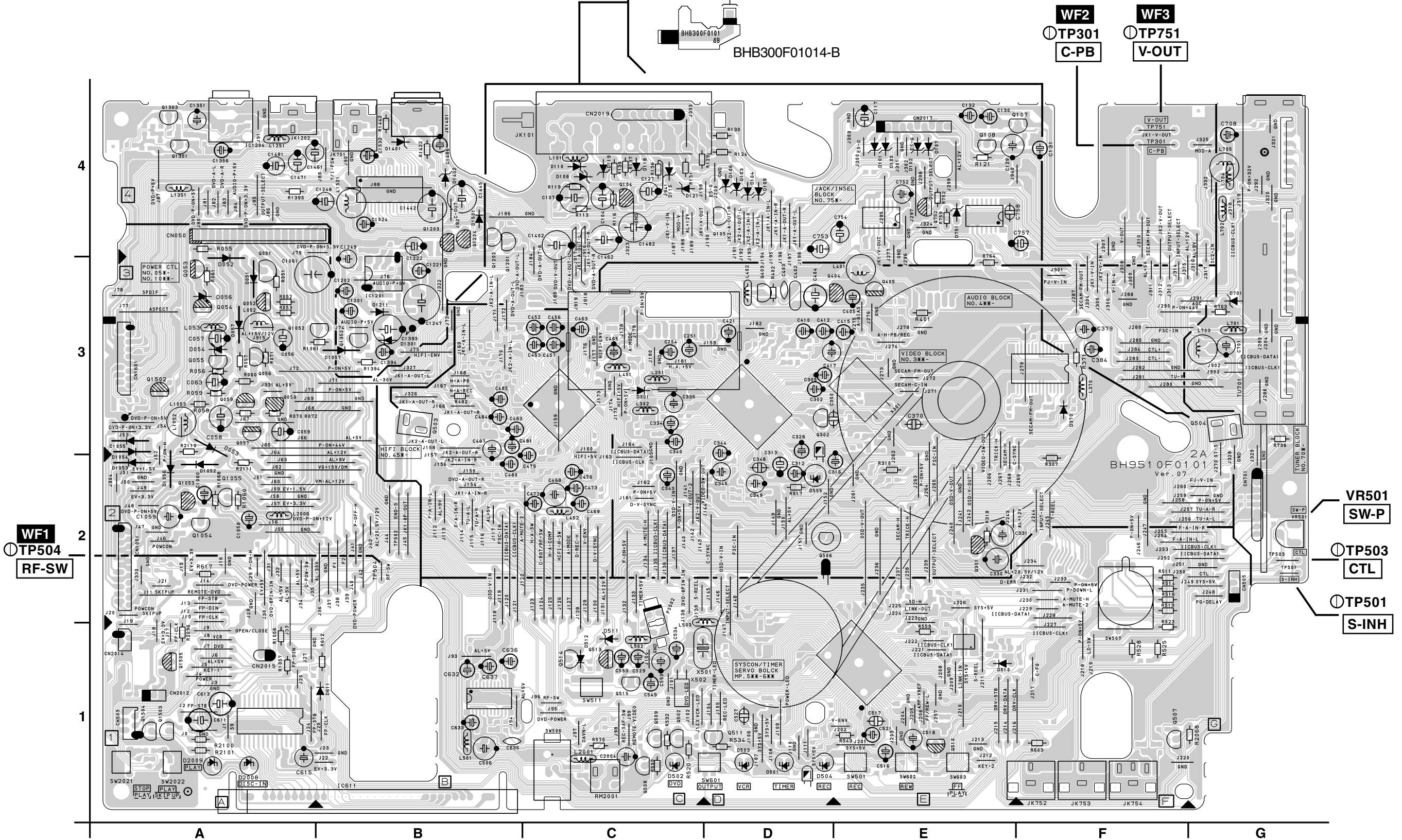


Main CBA Top View & Sensor CBA Top View

Sensor CBA Top View



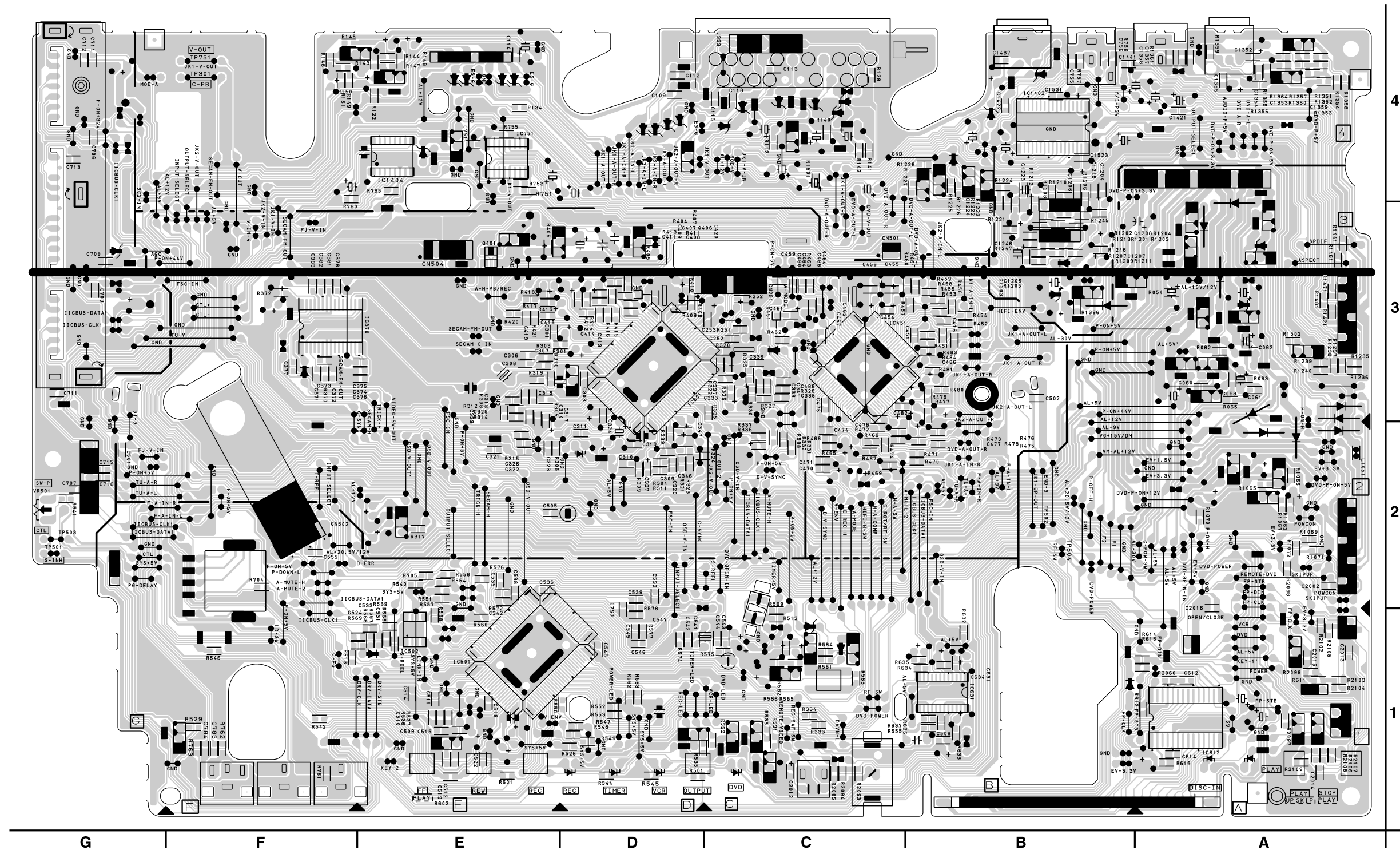
NOTE :  
Either BH9510F01011, BH9510F01012  
is used for the Main CBA in this S/M.



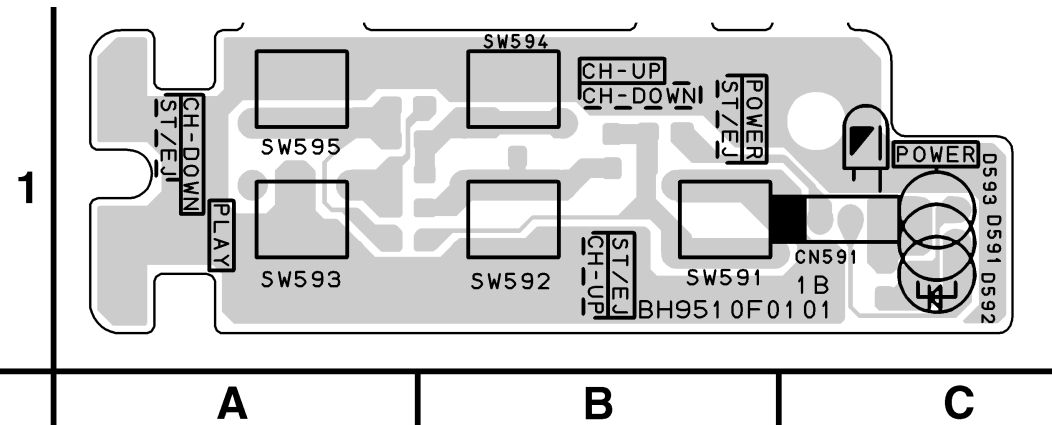


### Main CBA Bottom View

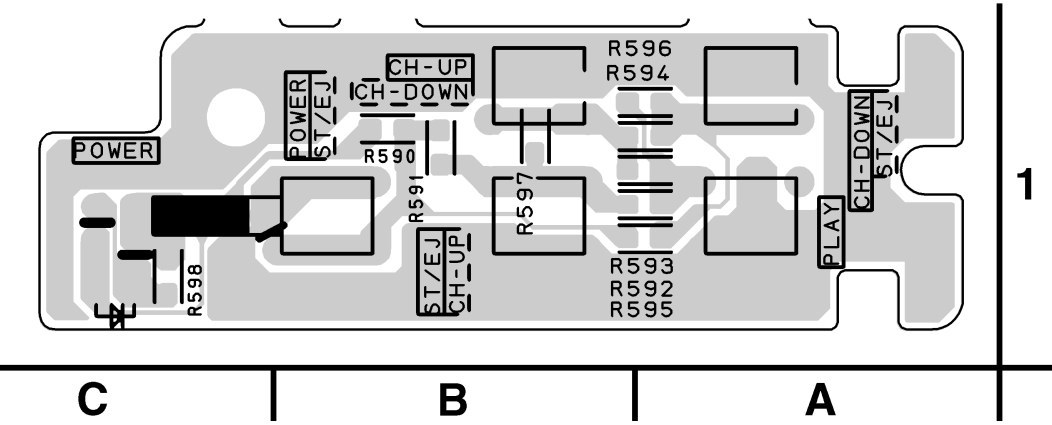
NOTE:  
Either BH9510F01011, BH9510F01012  
is used for the Main CBA in this S/M.



Function CBA Top View



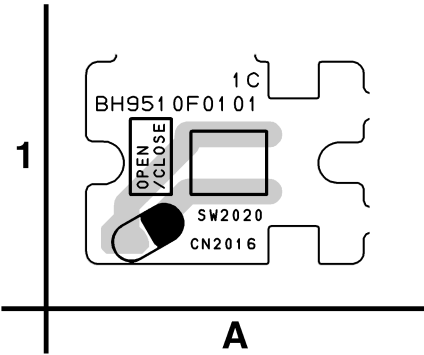
Function CBA Bottom View



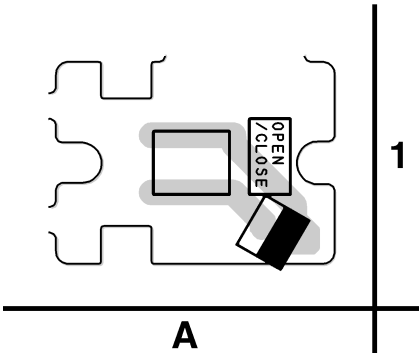
NOTE :  
Either BH9510F01011, BH9510F01012  
is used for the Function CBA in this S/M.

BH9510F01011B

DVD OPEN/CLOSE CBA Top View



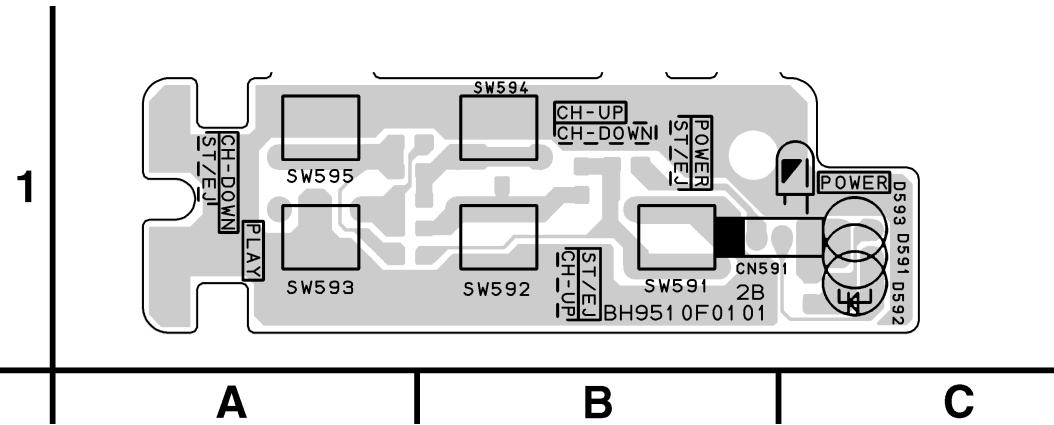
DVD OPEN /CLOSE CBA Bottom View



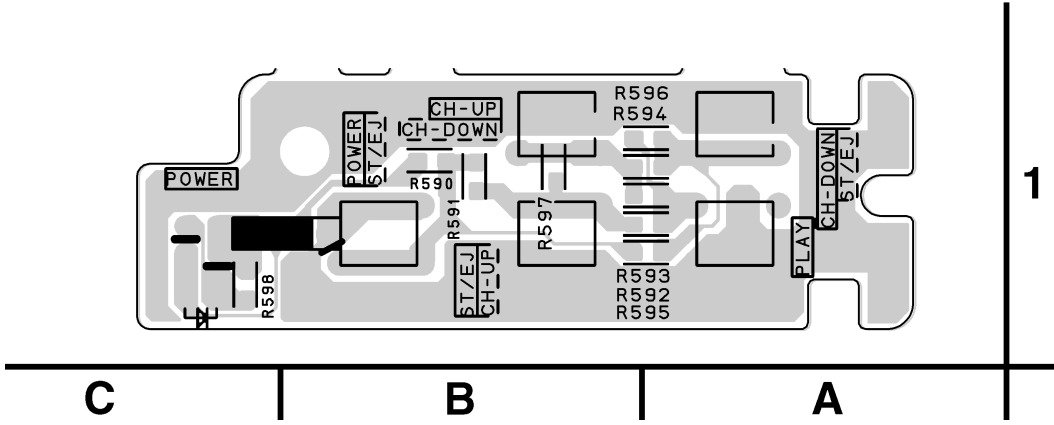
NOTE :  
Either BH9510F01011, BH9510F01012  
is used for the DVD Open/ Close CBA in this S/M.

BH9510F01011C

Function CBA Top View



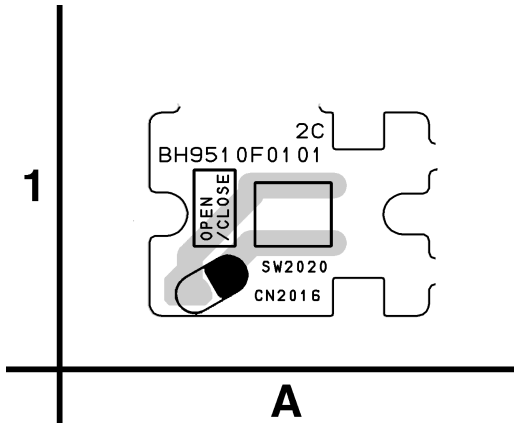
Function CBA Bottom View



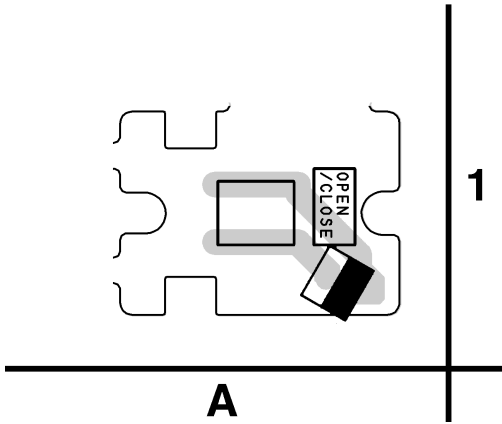
NOTE :  
Either BH9510F01011, BH9510F01012  
is used for the Function CBA in this S/M.

BH9510F01012B

DVD OPEN/CLOSE CBA Top View



DVD OPEN /CLOSE CBA Bottom View



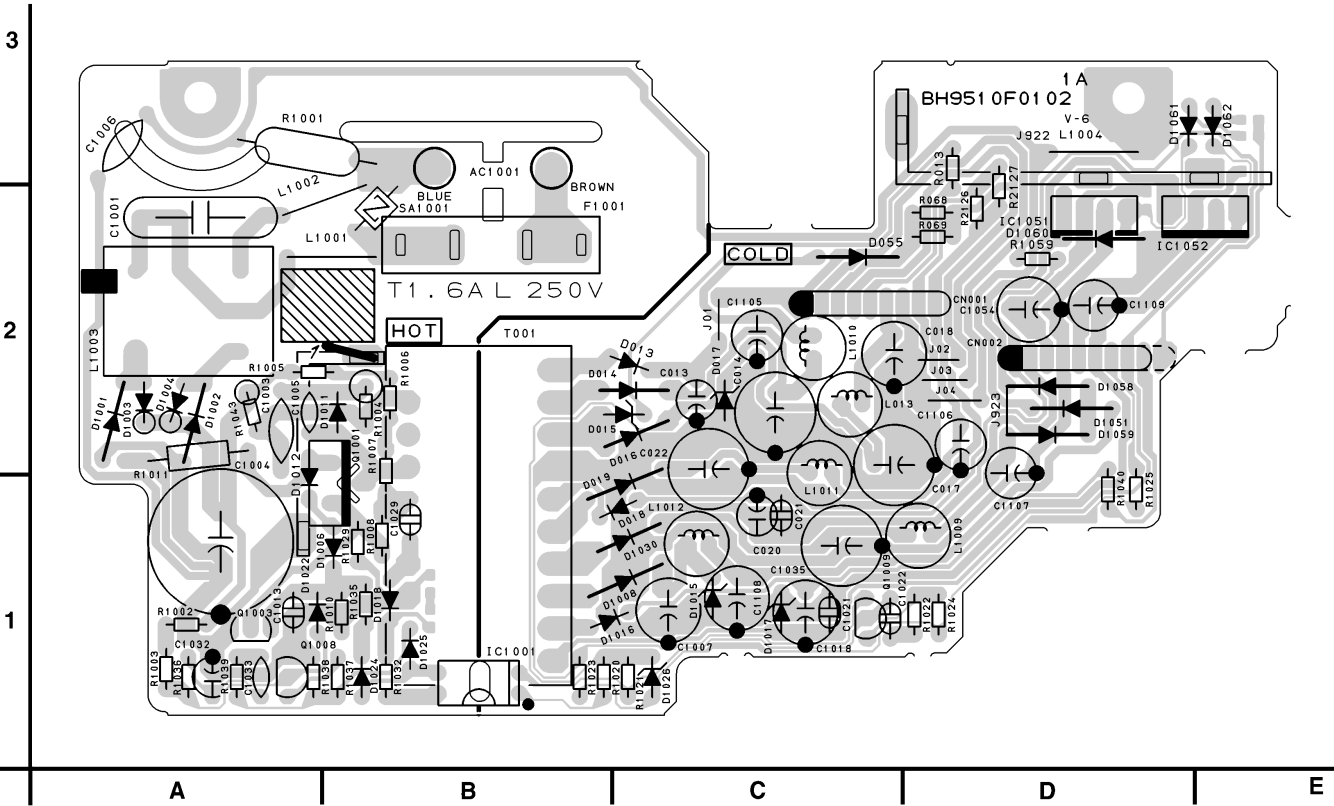
NOTE :  
Either BH9510F01011, BH9510F01012  
is used for the DVD Open/ Close CBA in this S/M.

BH9510F01012C

Power Supply CBA Top View

**CAUTION !**  
For continued protection against fire hazard,  
replace only with the same type fuse.

**NOTE :**  
The voltage for parts in hot circuit is measured  
using hot GND as a common terminal.



Power Supply CBA Bottom View

**CAUTION !**  
Fixed voltage ( or Auto voltage selectable ) power supply circuit is used in this unit.  
If Main Fuse (F1001) is blown, check to see that all components in the power supply  
circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.

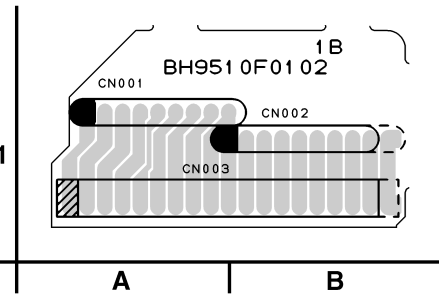
**BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER  
SUPPLY CIRCUIT , AN ISOLATION TRANSFORMER MUST BE USED.  
ALSO , IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT  
SLOWLY , WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY  
CIRCUIT , A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.**

**NOTE :**  
Either BH9510F01021, BH9510F01022  
is used for the Power Supply CBA in this S/M.

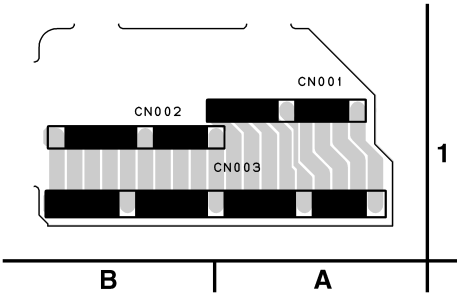


BH9510F01021A

Junction CBA Top View



Junction CBA Bottom View



**NOTE :**  
Either BH9510F01021, BH9510F01022  
is used for the Junction CBA in this S/M.

BH9510F01021B

Power Supply CBA Top View

Power Supply CBA Bottom View

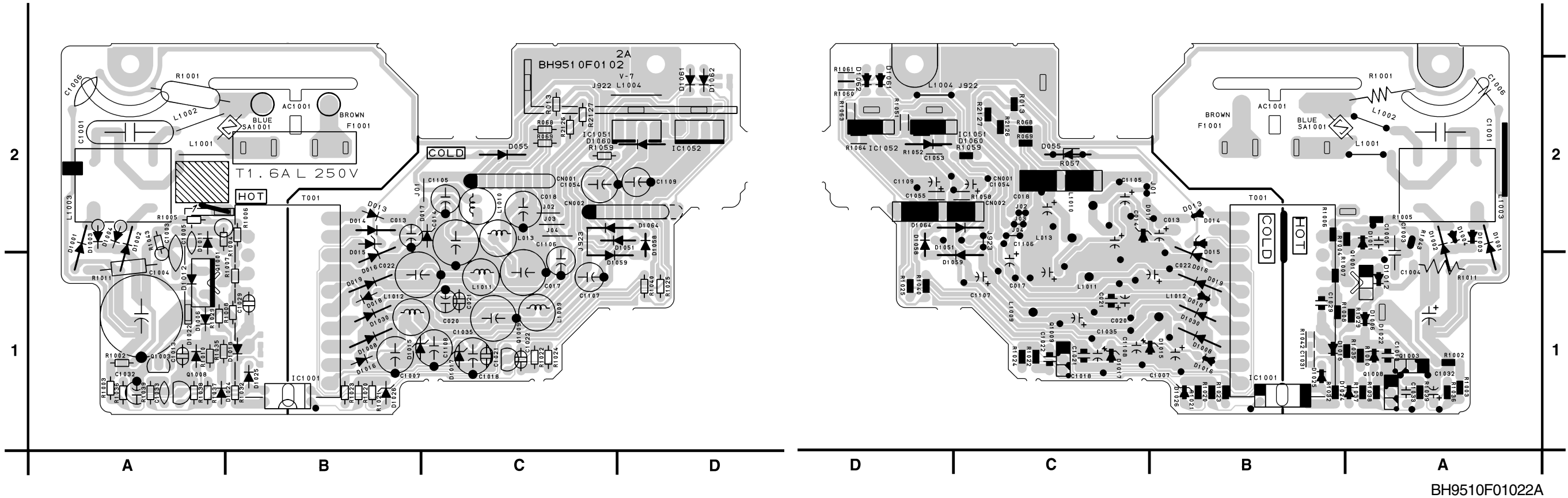
**CAUTION !**  
For continued protection against fire hazard,  
replace only with the same type fuse.

**NOTE :**  
The voltage for parts in hot circuit is measured  
using hot GND as a common terminal.

**CAUTION !**  
Fixed voltage ( or Auto voltage selectable ) power supply circuit is used in this unit.  
If Main Fuse (F1001) is blown, check to see that all components in the power supply  
circuit are not defective before you connect the AC plug to the AC power supply.  
Otherwise it may cause some components in the power supply circuit to fail.

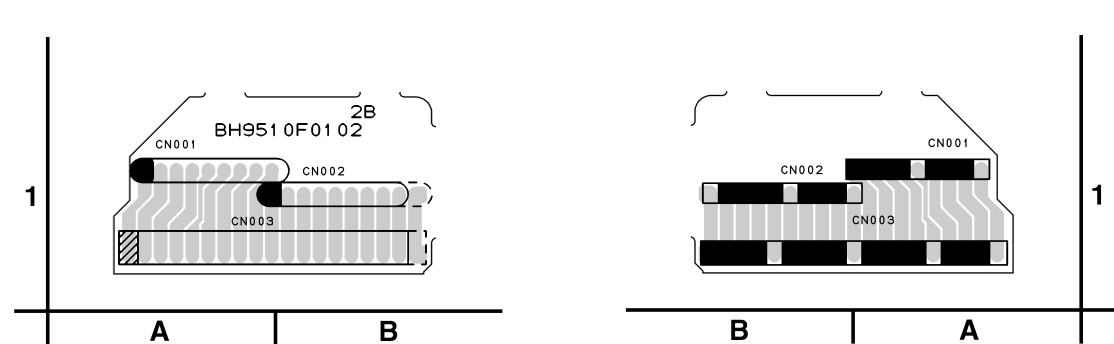
**BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER  
SUPPLY CIRCUIT , AN ISOLATION TRANSFORMER MUST BE USED.  
ALSO , IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT  
SLOWLY , WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY  
CIRCUIT , A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.**

NOTE :  
Either BH9510F01021, BH9510F01022  
is used for the Power Supply CBA in this S/M.



Junction CBA Top View

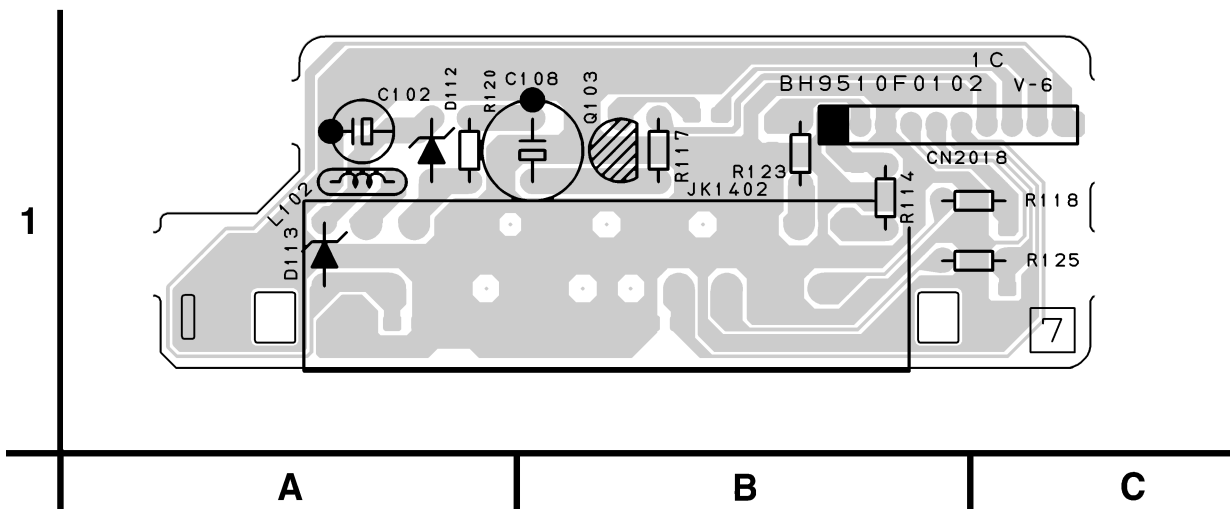
Junction CBA Bottom View



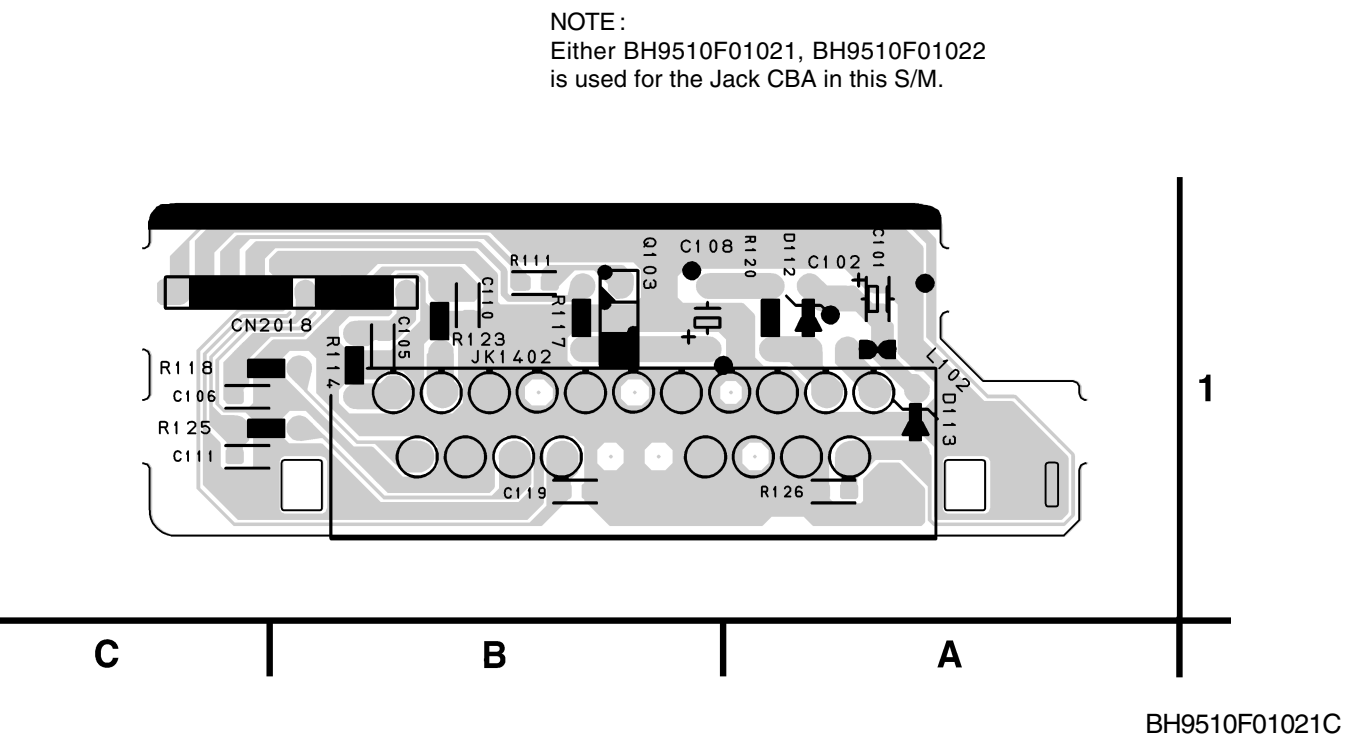
NOTE :  
Either BH9510F01021, BH9510F01022  
is used for the Junction CBA in this S/M.

BH9510F01022B

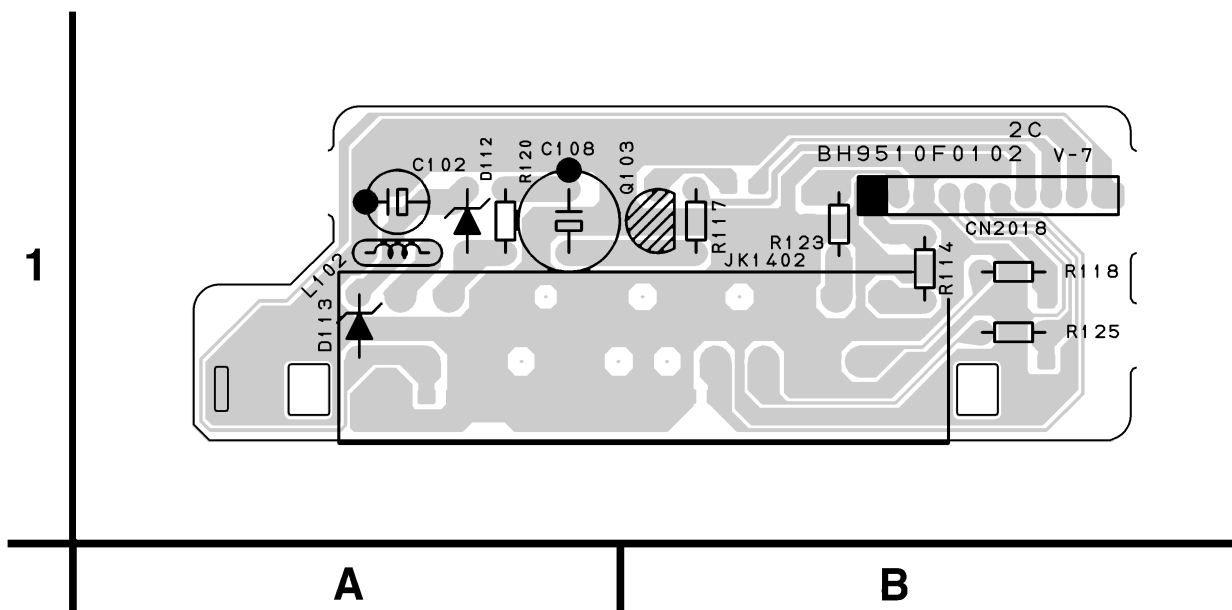
Jack CBA Top View



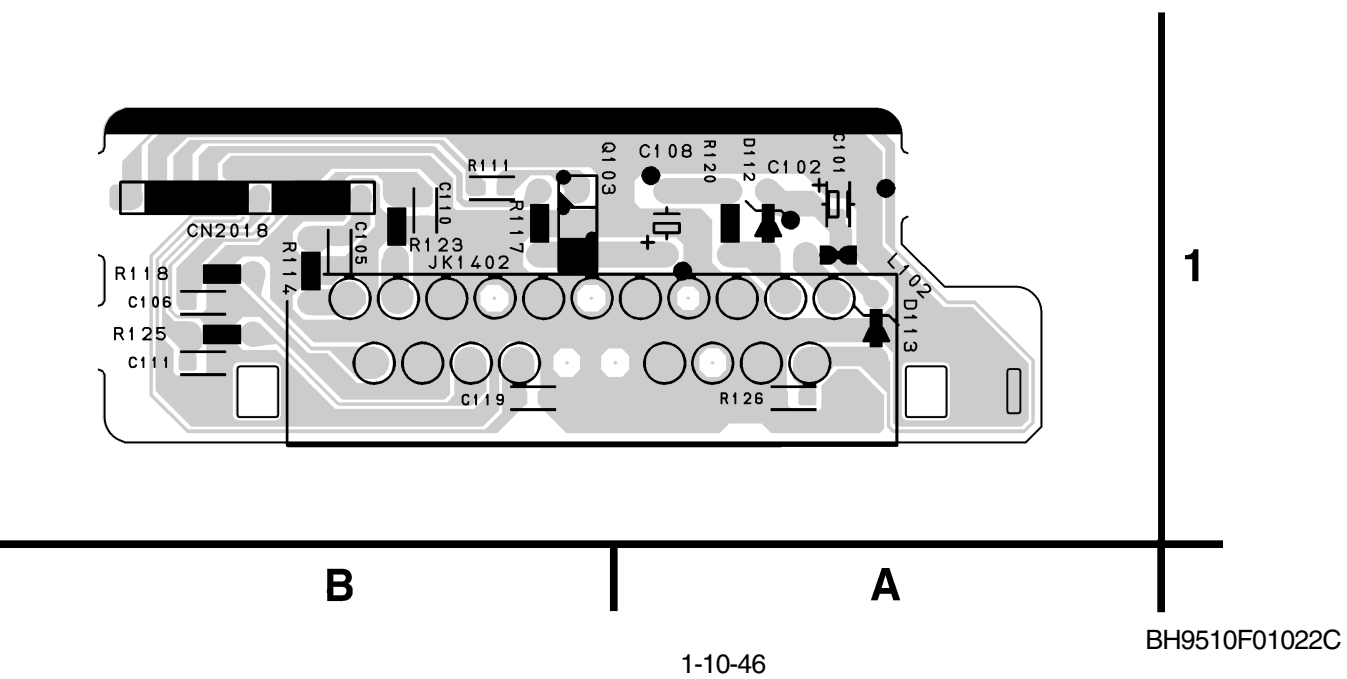
Jack CBA Bottom View



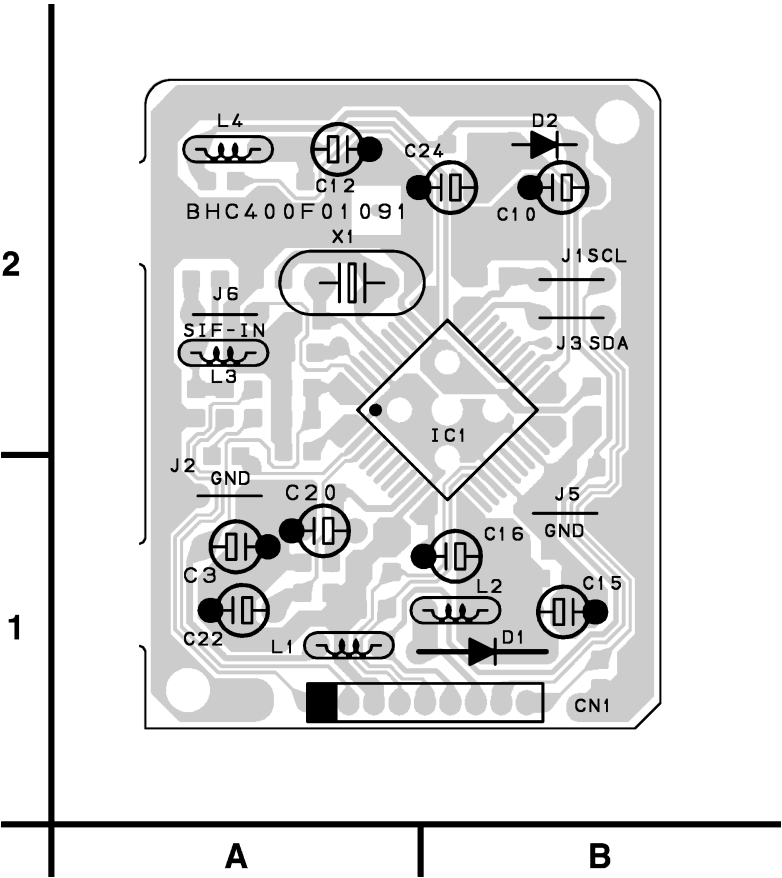
Jack CBA Top View



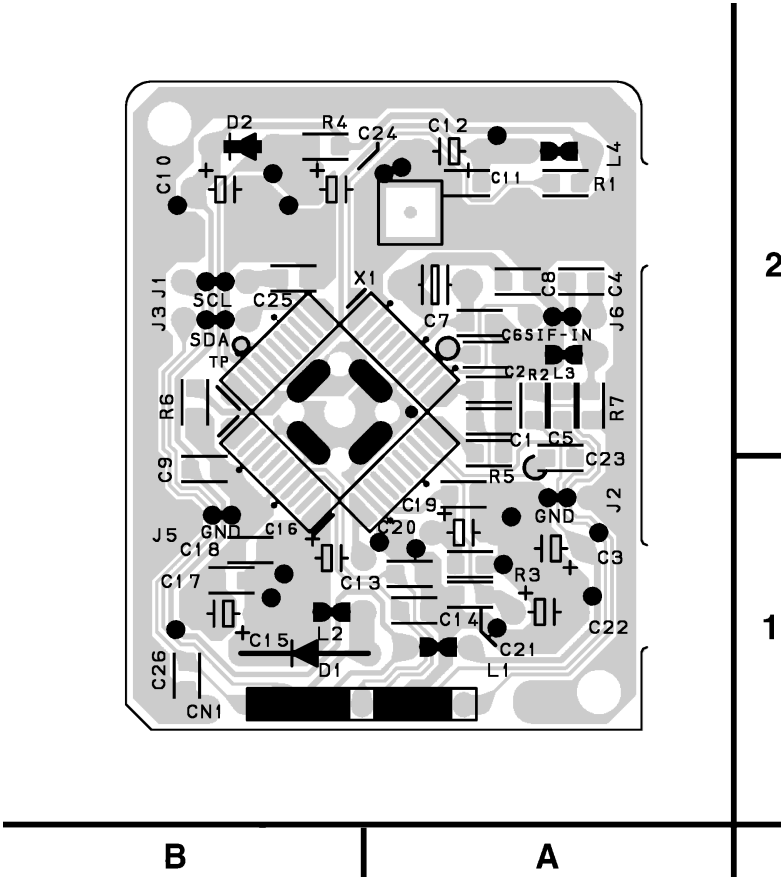
Jack CBA Bottom View



AFV CBA Top View

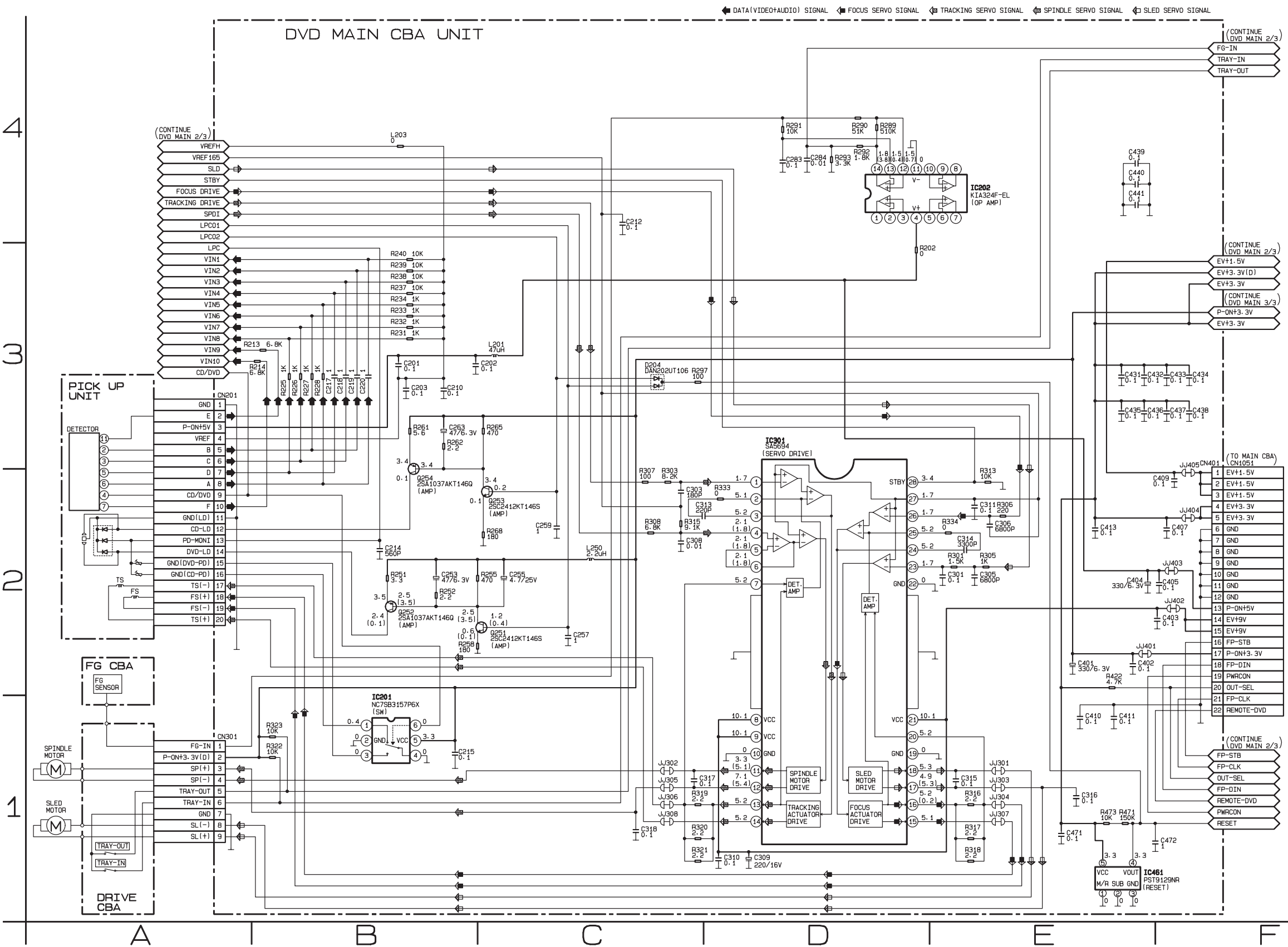


AFV CBA Bottom View



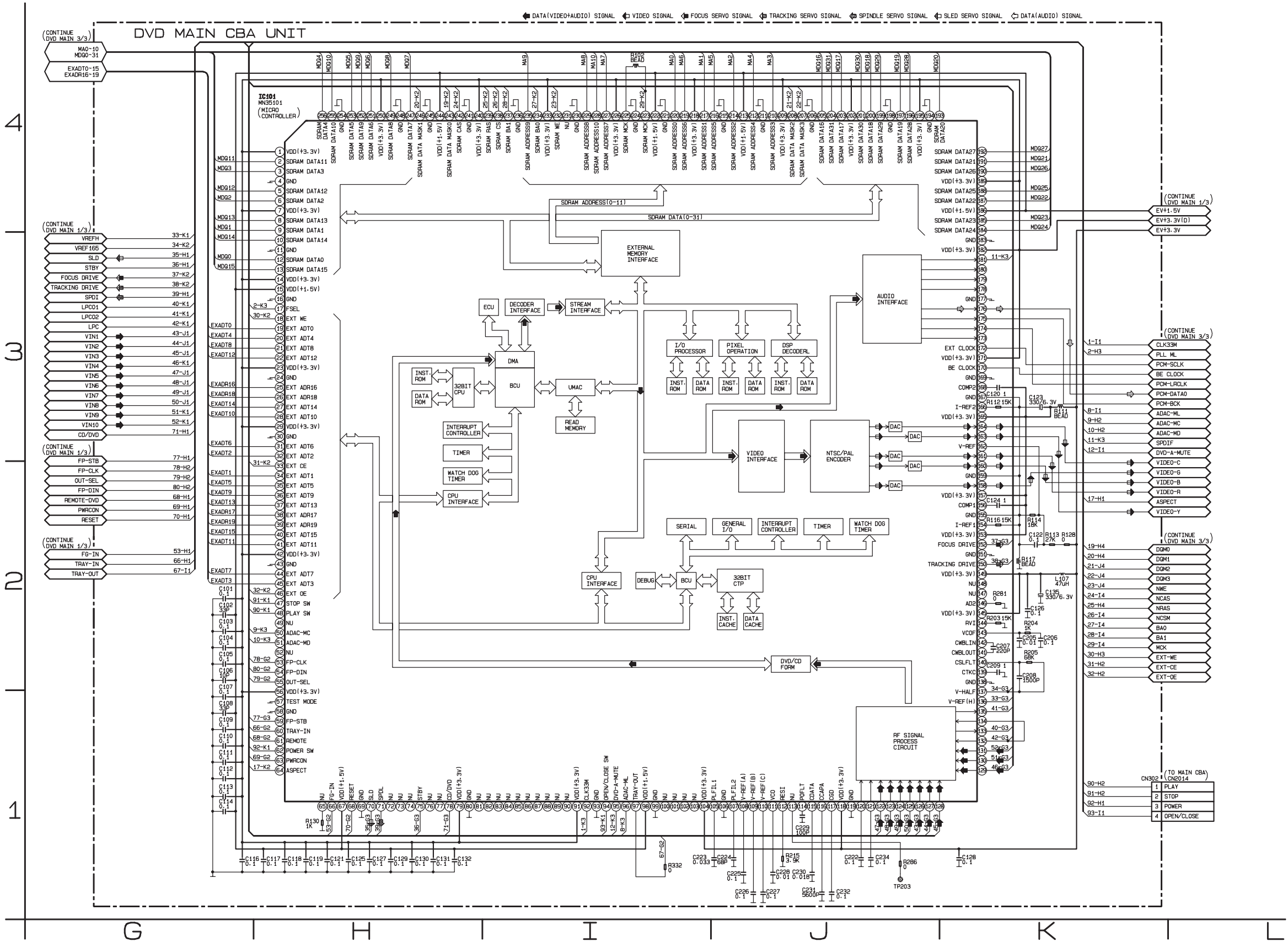
BHC400F01091

DVD Main 1/3 Schematic Diagram < DVD Section >





DVD Main 2/3 Schematic Diagram < DVD Section >



## IC101 VOLTAGE CHART

PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP
1	3.3	3.3	33	2.2	2.9	65	0.1	0.1	97	3.4	3.4	129	2.0	2.0	161	0.5	0.5	193	~	~	225	1.9	1.9
2	~	~	34	~	~	66	1.2	2.5	98	1.6	1.6	130	2.2	2.2	162	1.4	1.4	194	0	0	226	3.3	3.3
3	~	~	35	~	~	67	1.6	1.6	99	0	0	131	2.3	2.3	163	-----	-----	195	3.3	3.3	227	~	~
4	0	0	36	~	~	68	3.4	3.4	100	-----	-----	132	0.4	0.1	164	0.9	0.9	196	~	~	228	~	~
5	~	~	37	~	~	69	0	0	101	-----	-----	133	1.2	0.4	165	3.3	3.3	197	~	~	229	~	~
6	~	~	38	0.3	0.5	70	1.7	1.7	102	-----	-----	134	0.4	0.1	166	1.5	1.5	198	0	0	230	0	0
7	3.3	3.3	39	0.1	0.1	71	2.4	1.7	103	-----	-----	135	0.2	0.2	167	0	0	199	~	~	231	-----	-----
8	~	~	40	~	~	72	-----	-----	104	3.3	3.3	136	2.3	2.3	168	2.1	2.1	200	~	~	232	3.3	3.3
9	~	~	41	~	~	73	-----	-----	105	0.9	0.9	137	1.7	1.7	169	0	0	201	~	~	233	3.3	3.3
10	~	~	42	3.3	3.3	74	-----	-----	106	0	0	138	0	0	170	0.8	0.8	202	3.3	3.3	234	1.6	1.6
11	0	0	43	0	0	75	3.4	3.4	107	0.8	0.8	139	1.7	1.7	171	3.3	3.3	203	~	~	235	~	~
12	~	~	44	~	~	76	-----	-----	108	1.6	1.6	140	1.7	1.7	172	1.6	1.6	204	~	~	236	0	0
13	~	~	45	~	~	77	-----	-----	109	2.1	2.1	141	1.7	1.7	173	-----	-----	205	~	~	237	1.7	1.7
14	3.3	3.3	46	2.0	2.6	78	0.1	0.1	110	2.6	2.6	142	1.7	1.7	174	1.8	1.8	206	0	0	238	3.0	3.0
15	1.5	1.5	47	3.3	3.4	79	3.3	3.3	111	2.0	2.0	143	0.5	0.5	175	1.7	1.7	207	2.4	3.5	239	3.3	3.3
16	0	0	48	3.2	3.4	80	0	0	112	0.7	0.9	144	1.6	1.6	176	1.4	0.1	208	2.4	2.1	240	3.3	3.3
17	3.4	3.4	49	-----	-----	81	-----	-----	113	0	0	145	3.3	3.3	177	0	0	209	3.3	3.3	241	0	0
18	3.4	3.4	50	3.4	3.4	82	-----	-----	114	1.8	1.8	146	0	0	178	-----	-----	210	~	~	242	3.2	3.2
19	~	~	51	3.4	3.4	83	-----	-----	115	1.4	1.4	147	-----	-----	179	-----	-----	211	0	0	243	2.4	2.1
20	~	~	52	-----	-----	84	-----	-----	116	0.3	0.3	148	-----	-----	180	-----	-----	212	~	~	244	1.5	1.5
21	~	~	53	3.4	3.4	85	-----	-----	117	1.6	1.6	149	3.3	3.3	181	1.7	1.7	213	1.5	1.5	245	0	0
22	~	~	54	3.4	3.4	86	-----	-----	118	3.3	3.3	150	1.7	1.7	182	3.3	3.3	214	~	~	246	2.4	2.1
23	3.3	3.3	55	3.3	3.3	87	-----	-----	119	0	0	151	0	0	183	0	0	215	0	0	247	~	~
24	0	0	56	3.3	3.3	88	-----	-----	120	1.9	1.9	152	1.7	1.7	184	~	~	216	~	~	248	0	0
25	0.4	0.4	57	0	0	89	-----	-----	121	1.9	1.9	153	3.3	3.3	185	~	~	217	~	~	249	~	~
26	0.9	0.6	58	0	0	90	-----	-----	122	2.4	2.4	154	1.4	1.4	186	1.5	1.5	218	3.3	3.3	250	3.3	3.3
27	~	~	59	3.3	3.3	91	3.3	3.3	123	2.4	2.4	155	0	0	187	~	~	219	~	~	251	~	~
28	~	~	60	3.4	3.4	92	1.7	1.5	124	2.4	2.4	156	2.2	2.2	188	~	~	220	~	~	252	~	~
29	3.3	3.3	61	3.1	3.1	93	0	0	125	2.4	2.4	157	3.3	3.3	189	3.3	3.3	221	0	0	253	~	~
30	0	0	62	3.2	3.4	94	2.0	2.0	126	2.0	2.0	158	0.7	0.7	190	~	~	222	1.5	1.5	254	0	0
31	~	~	63	3.4	3.4	95	3.4	0.1	127	2.0	2.0	159	0	0	191	~	~	223	1.9	1.9	255	~	~
32	~	~	64	0.8	0.8	96	3.4	3.4	128	2.0	2.0	160	0.5	0.5	192	~	~	224	0	0	256	~	~

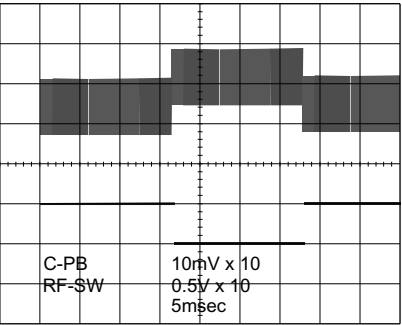
## 1



# WAVEFORMS

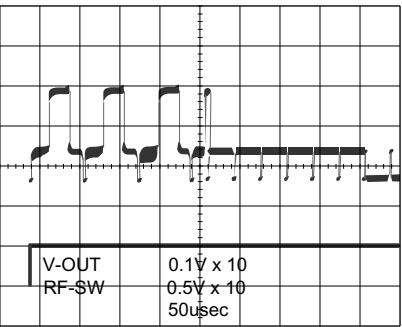
**WF2** UPPER (TP301 of Main CBA)

**WF1** LOWER (TP504 of Main CBA)

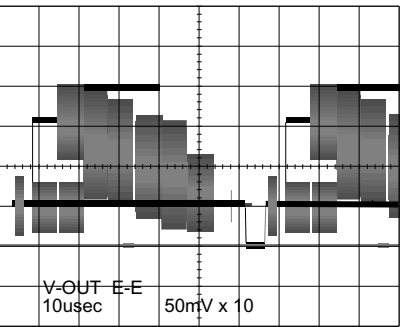


**WF3** UPPER (TP751 of Main CBA)

**WF1** LOWER (TP504 of Main CBA)



**WF3** (TP751 of Main CBA)



# WAVEFORMS

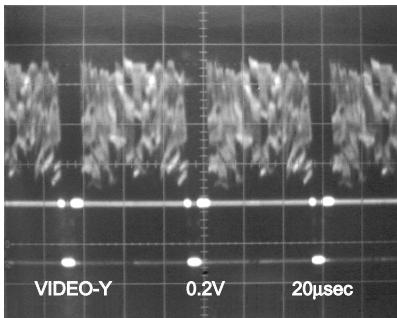
## NOTE:

Input

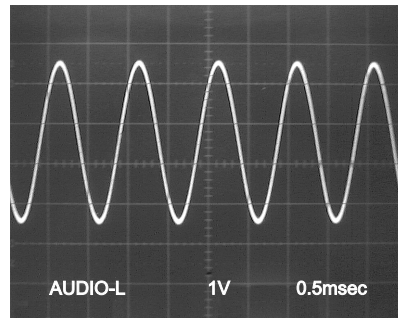
CD: 1kHz PLAY  
(WF7~WF9)

DVD: POWER ON (STOP) MODE  
(WF4~WF6)

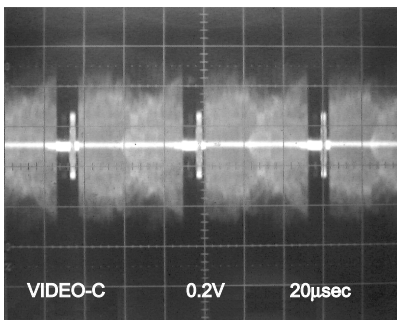
**WF4** Pin 1 of CN1601



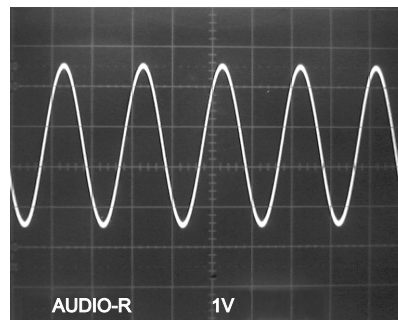
**WF7** Pin 13 of CN1601



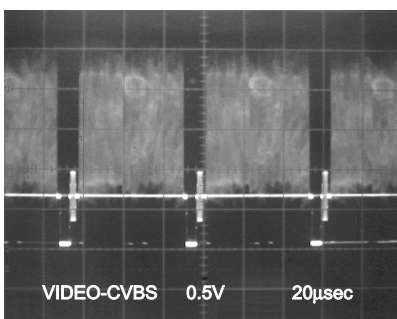
**WF5** Pin 9 of CN1601



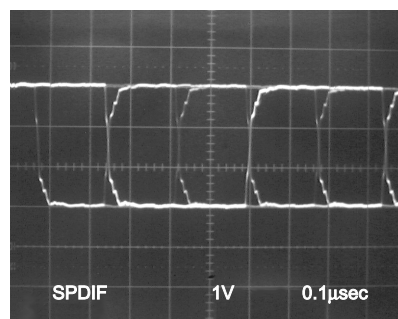
**WF8** Pin 15 of CN1601



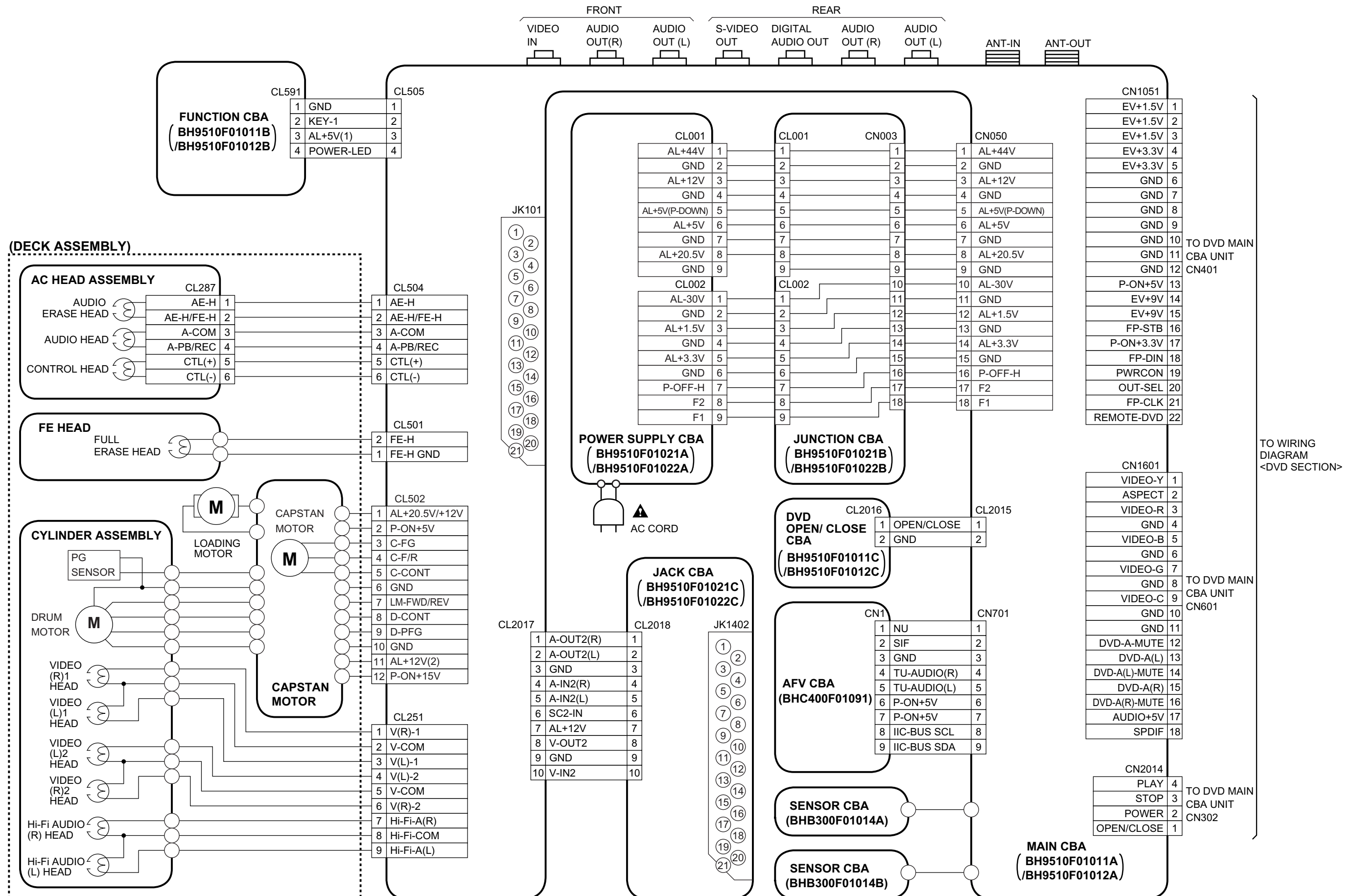
**WF6** Pin 31 of IC1402



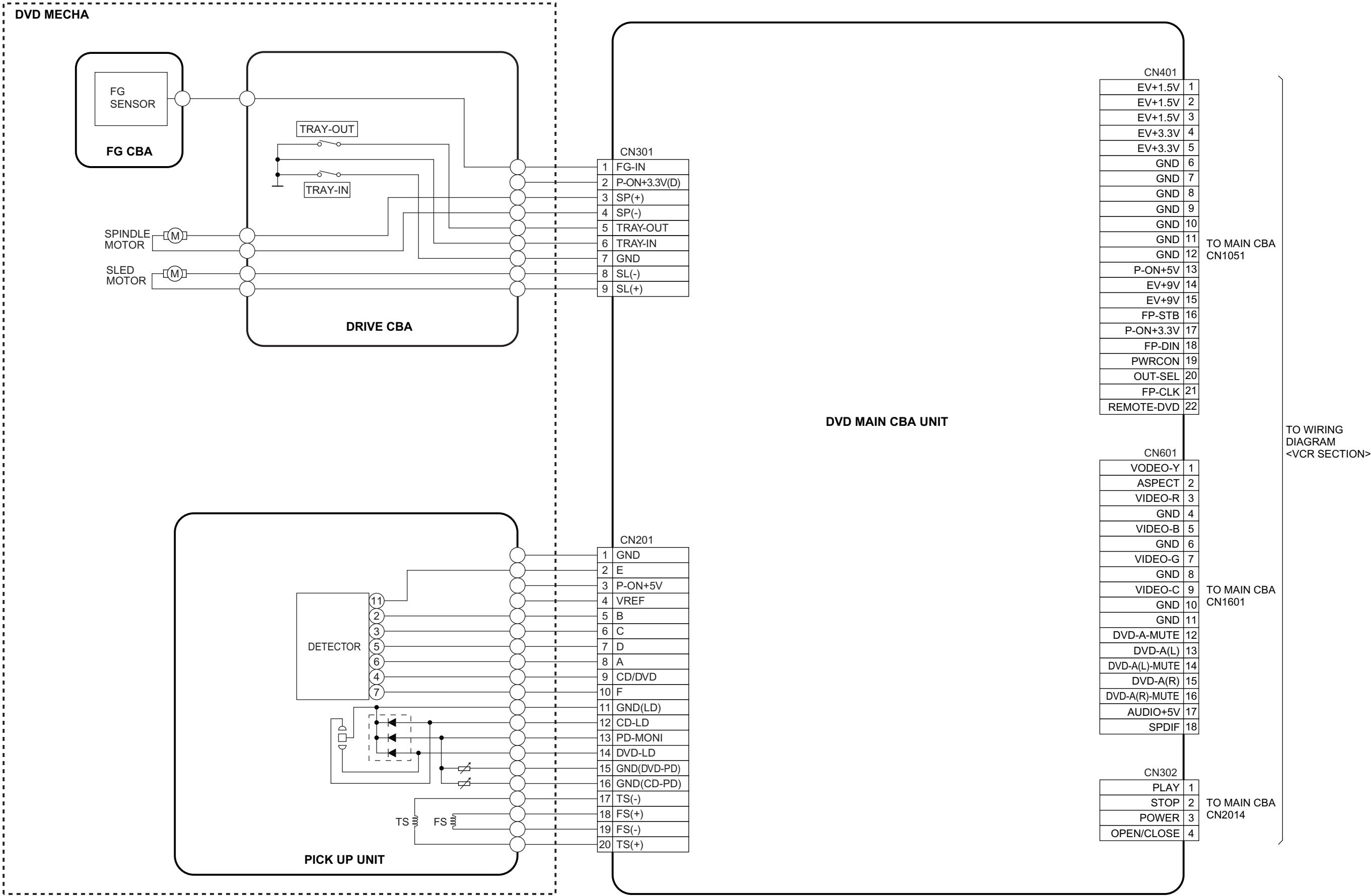
**WF9** Pin 18 of CN1601



## WIRING DIAGRAM < VCR SECTION >



WIRING DIAGRAM < DVD SECTION >





# IC PIN FUNCTION DESCRIPTIONS

## [ VCR Section ]

### IC501( SERVO / SYSTEM CONTROL IC )

“H” ≥ 4.5V, “L” ≤ 1.0V

Pin No.	IN/ OUT	Signal Name	Function	Active Level
1	IN	SC2-IN	Input Signal from Pin 8 of SCART2	A/D
2	IN	PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage	A/D
3	IN	POW-SAF	P-ON Power Detection Input Signal	A/D
4	IN	END-S	Tape End Position Detect Signal	A/D
5	IN	AFC	Automatic Frequency Control Signal	A/D
6	IN	V-ENV	Video Envelope Comparator Signal	A/D
7	IN	KEY-1	Key Scan Input Signal 1	A/D
8	IN	KEY-2	Key Scan Input Signal 2	A/D
9	IN	LD-SW	Deck Mode Position Detector Signal	A/D
10	IN	ST-S	Tape Start Position Detector Signal	A/D
11	-	NU	Not Used	-
12	-	NU	Not Used	-
13	OUT	D-V-SYNC	Dummy V-sync Output	H/Hi-z
14	IN	REMOTE-VIDEO	Remote Control Sensor	L
15	OUT	C-ROTA	Color Phase Rotary Changeover Signal	H/L
16	OUT	H-A-SW	Video Head Amp Switching Pulse	H/L
17	IN	H-A-COMP	Head Amp Comparator Signal	H/L
18	OUT	RF-SW	Video Head Switching Pulse	H/L
19	OUT	Hi-Fi-H-SW	HiFi Audio Head Switching Pulse	H/L
20	-	NU	Not Used	-
21	OUT	DVD-POWER	DVD Power Control Signal	H
22	-	NU	Not Used	-

Pin No.	IN/ OUT	Signal Name	Function	Active Level
23	OUT	POWER-LED	“POWER” LED Signal Output	H/L
24	-	NU	Not Used	-
25	OUT	TIMER-LED	“TIMER” LED Signal Output	H/L
26	OUT	REC-LED	“REC” LED Signal Output	H/L
27	-	NU	Not Used	-
28	-	NU	Not Used	-
29	OUT	DVD-LED	“DVD” LED Signal Output	H/L
30	OUT	VCR-LED	“VCR” LED Signal Output	H/L
31	IN	REC-SAF-SW	Recording Safety SW Detect (With Record tab=”L”/ With out Record tab=”H”)	H/L
32	IN	A-MODE	Hi-Fi Tape Detection Signal	L
33	OUT	D-REC-H	Delayed Record Signal	H
34	IN	RESET	System Reset Signal (Reset=”L”)	L
35	IN	XCin	Sub Clock	-
36	OUT	XCOU	Sub Clock	-
37	-	Vcc	Vcc	-
38	IN	Xin	Main Clock Input	-
39	OUT	Xout	Main Clock Input	-
40	-	Vss	Vss(GND)	-
41	OUT	INPUT SELECT	DVD/AV3 Input Select	H/L
42	IN	DVD-8PIN-IN	SCART 8Pin DVD Input Control Signal	H/L
43	IN	CLKSEL	Clock Select (GND)	L
44	IN	OSCin	Clock Input for letter size	-
45	OUT	OSCO	Clock Output for letter size	-
46	-	NU	Not Used	-
47	-	NU	Not Used	-
48	IN	FSC-IN [4.43MHz]	4.43MHz Clock Input	-
49	-	OSDVss	OSDVss	-
50	IN	OSD-V-IN	OSD Video Signal Input	-
51	-	NU	Not Used	-



Pin No.	IN/ OUT	Signal Name	Function	Active Level
52	OUT	OSD-V-OUT	OSD Video Signal Output	-
53	-	OSDVcc	OSDVcc	-
54	-	NU	Not Used	-
55	-	NU	Not Used	-
56	-	NU	Not Used	-
57	-	NU	Not Used	-
58	IN	C-SYNC	Composite Synchronized Pulse	PULSE
59	OUT	8POUT-1	Control SCART 1 8Pin Level by using 8POUT-1 and 8POUT-2	H/L
60	OUT	8POUT-2		
61	-	NU	Not Used	-
62	-	NU	Not Used	-
63	-	NU	Not Used	-
64	-	NU	Not Used	-
65	-	NU	Not Used	-
66	OUT	C-POW-SW	Capstan Power Switching Signal	H/L
67	OUT	P-ON-H	Power On Signal at High	H
68	OUT	DRV-DATA	VFD Driver IC Control Data	H/L
69	OUT	DRV-STB	VFD Driver IC Chip Select Signal	H/L
70	OUT	DRV-CLK	VFD Driver IC Control Clock	H/L
71	OUT	IIC-BUS-SCL	IIC BUS Control Clock	H/L
72	IN/ OUT	IIC-BUS-SDA	IIC BUS Control Data	H/L
73	OUT	P-OFF-H	Power Off at High	H
74	OUT	OUTPUT-SELECT	Output Select	H/L
75	IN	DVD-POWER-MONITOR	DVD Power Monitor Signal (P-off="L", P-on="H")	H/L
76	OUT	C-CONT	Capstan Motor Control Signal	PWM
77	OUT	D-CONT	Drum Motor Control Signal	PWM
78	OUT	C-F/R	Capstan Motor FWD/REV Control Signal (FWD="L"/REV="H")	H/L
79	IN	S-REEL	Supply Reel Rotation Signal	PULSE
80	IN	T-REEL	Take Up Reel Rotation Signal	PULSE

Pin No.	IN/ OUT	Signal Name	Function	Active Level
81	OUT	LM-FWD/REV	Loading Motor Control Signal	H/L/Hi-z
82	OUT	LINE-MUTE	Audio Mute Control Signal	H
83	OUT	A-MUTE-H	Audio Mute Control Signal (Mute = "H")	H
84	OUT	FF/REW-L	CTL Frequency Characteristics Switching Signal (FF/REW="L")	L
85	-	NU	Not Used	-
86	IN	P-DOWN-L	Power Voltage Down Detector Signal	L
87	IN	C-FG	Capstan Motor Rotation Detection Pulse	PULSE
88	-	NU	Not Used	-
89	-	NU	Not Used	-
90	IN	D-PFG	Drum Motor Phase/Frequency Generator	PULSE
91	-	AMPVREF OUT	V-Ref for CTL AMP	-
92	-	AMPVREF in	V-Ref for CTL AMP	-
93	-	NU	Not Used	-
94	IN/ OUT	CTL (-)	Playback/Record Control Signal (-)	H/L
95	IN/ OUT	CTL (+)	Playback/Record Control Signal (+)	H/L
96	-	AMPC	CTL AMP Connected Terminal	-
97	-	CTLAMP out	To Monitor for CTL AMP Output	PULSE
98	-	AMPVcc	AMPVcc	-
99	-	AVcc	A/D Converter Power Input/ Standard Voltage Input	-
100	IN	AGC	IF AGC Control Signal	A/D

**Notes:**

Abbreviation for Active Level:

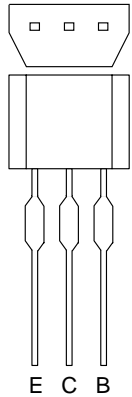
PWM -----Pulse Wide Modulation

A/D-----Analog - Digital Converter

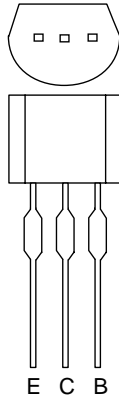
# IC612 [ PT6315-S(TP) ]

Pin No.	In/Out	Signal Name	Name Function
1	In	CLK	Clock Input
2	In	STB	Serial Interface Strobe
3	In	K1	Key Data 1 Input
4	In	K2	Key Data 2 Input
5	-	VSS	GND
6	-	VDD	Power Supply
7	Out	a	Segment Output
8		b	
9		c	
10		d	
11		e	
12		f	
13		g	
14		h	
15	-	VEE	Pull Down Level
16	Out	i	Segment Output
17	Out	7G	Grid Output
18		6G	
19		5G	
20		4G	
21		3G	
22		2G	
23		1G	
24	-	VDD	Power Supply
25	-	VSS	GND
26	In	OSC	Oscillator Input
27	Out	DOUT	Serial Data Output
28	In	DIN	Serial Data Input

# LEAD IDENTIFICATIONS

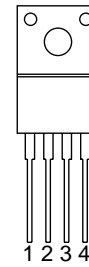


BN1F4M-T  
BA1F4M-T  
KTA1266(GR)  
KTC3199(Y,GR,BL)  
2SC2785(J,H,F,K)  
KRC103M  
KRA103M  
2SA1175(J,H,F)  
KTA1267(Y)  
KTA1267(GR)  
KRA104M

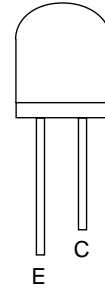


2SC1815-BL(TPE2)  
2SC1815-Y(TPE2)  
2SC1815-GR(TPE2)  
2SC2120-Y(TPE2)  
KTC3203(Y)  
2SA1015-GR(TPE2)  
2SA1020(Y)  
2SC3266-Y(TPE2)  
KTA1281(Y)  
KTC3205(Y)

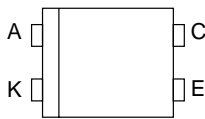
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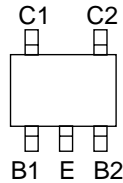
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PT204-6B-12



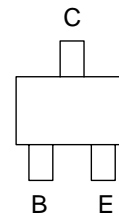
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EL817(A,B,C)



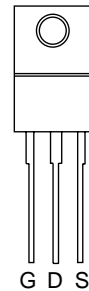
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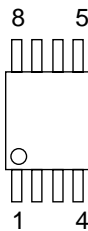
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FMG4A T148  
KRC103S RTK  
KTC3875Y-RTK



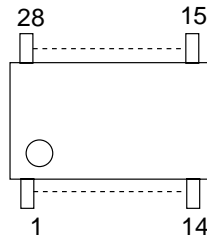
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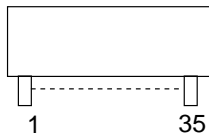
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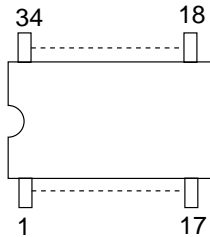
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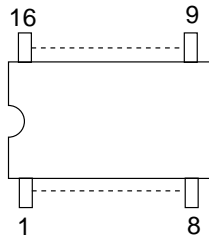
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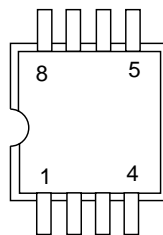
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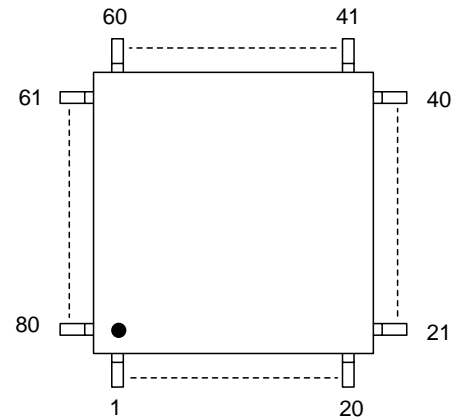
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BU4053BCF-E2



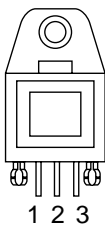
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BR24C04F-W



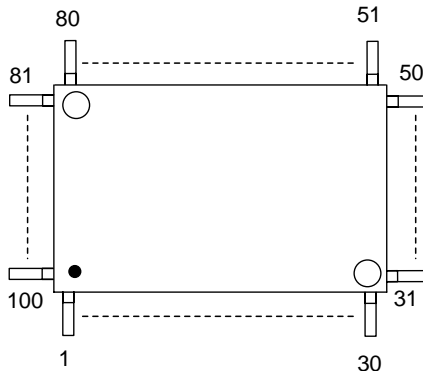
LA72648M



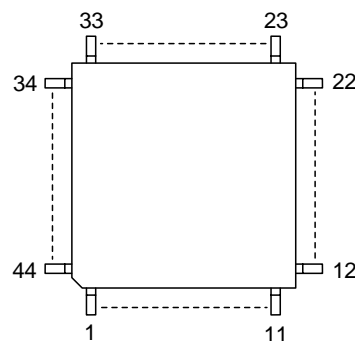
0C-0805T\*002  
GP1FA512TZV



QSZAB0RMB159  
LA71750AM-MTB



MSP3407G-QG-B8  
MSP3407G-QG-B8-V3  
MSP3417G-QG-B8  
MSP3417G-QG-B8-V3



## Note:

A: Anode  
K: Cathode  
E: Emitter  
C: Collector  
B: Base  
R: Reference  
S: Source  
G: Gate  
D: Drain

# DECK MECHANISM SECTION

## DVD PLAYER & VIDEO CASSETTE RECORDER DPVR-4600/DPVR-4800

### Sec. 2: Deck Mechanism Section

- Standard Maintenance
- Alignment for Mechanism
- Disassembly/Assembly of Mechanism
- Alignment Procedures of Mechanism

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# STANDARD MAINTENANCE

## Service Schedule of Components

H: Hours    ○: Check    ●: Change

Deck		Periodic Service Schedule			
Ref.No.	Part Name	1,000 H	2,000 H	3,000 H	4,000 H
B2	Cylinder Assembly	○	●	○	●
B3	Loading Motor Assembly			●	
B8	Pulley Assembly		●		●
B587	Tension Lever Assembly		●		●
B31	AC Head Assembly			●	
B573,B574	Reel S, Reel T			●	
B37	Capstan Motor		●		●
B52	Cap Belt		●		●
*B73	FE Head Assembly			●	
B86	F Brake Assembly (HI)		●		●
B133	Idler Assembly (HI)		●		●
B410	Pinch Arm Assembly		●		●
B414	M Brake (SP) Assembly (HI)		●		●
B416	M Brake (TU) Assembly (HI)		●		●
B525	LDG Belt		●		●

### Notes:

- 1.Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / Audio Control Head / Full Erase Head) using 90% Isopropyl Alcohol.
  - 2.After cleaning the parts, do all DECK ADJUSTMENTS.
  - 3.For the reference numbers listed above, refer to Deck Exploded Views.
- \* B73 ----- Recording Model only

## Cleaning

### Cleaning of Video Head

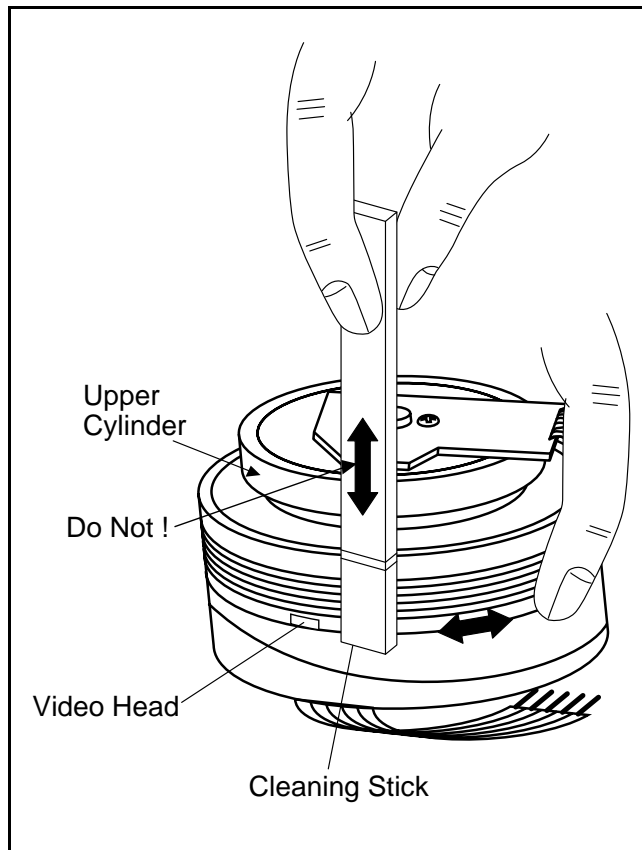
Clean the head with a head cleaning stick or chamois cloth.

#### Procedure

1. Remove the top cabinet.
2. Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
3. Put a few drops of 90% Isopropyl alcohol on the head cleaning stick or on the chamois cloth and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

#### Notes:

1. The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit.
3. Do not reuse a stained head cleaning stick or a stained chamois cloth.



### Cleaning of Audio Control Head

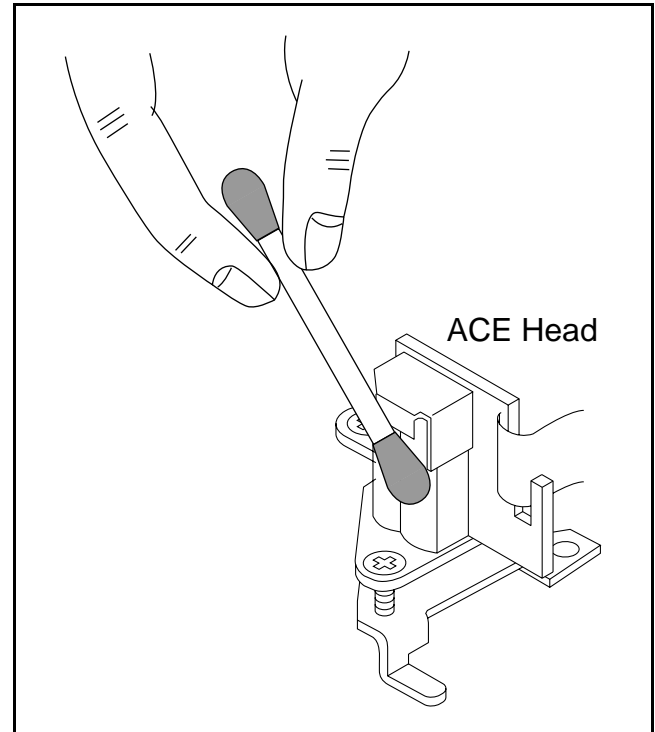
Clean the head with a cotton swab.

#### Procedure

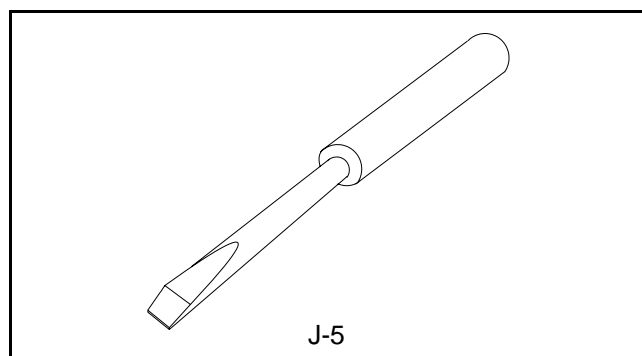
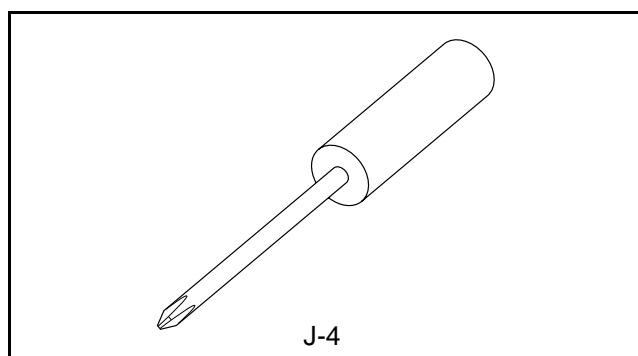
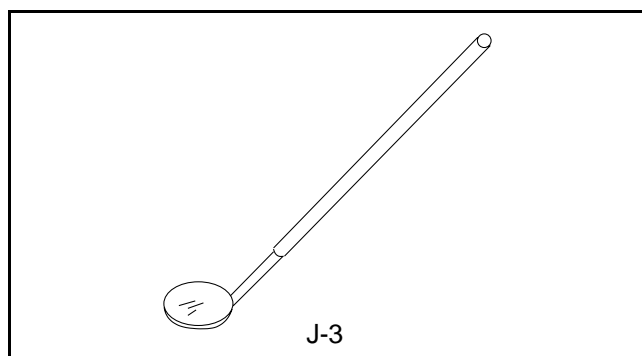
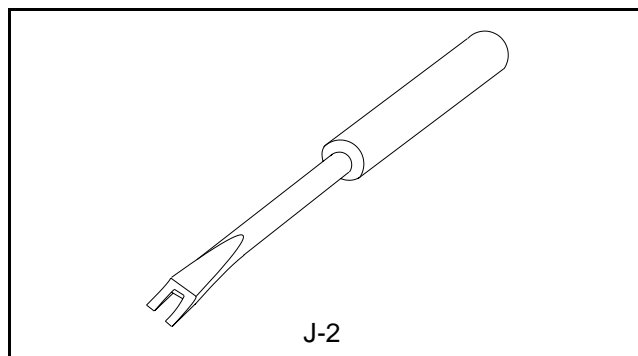
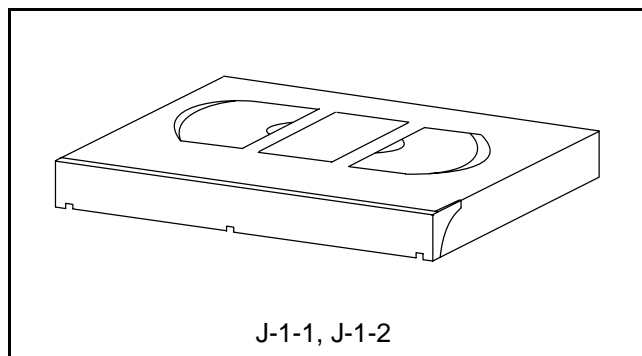
1. Remove the top cabinet.
2. Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

#### Notes:

1. Avoid cleaning the audio control head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



# SERVICE FIXTURE AND TOOLS



Ref. No.	Name	Part No.	Adjustment
J-1-1	Alignment Tape	FL6A	Head Adjustment of Audio Control Head
J-1-2	Alignment Tape	FL6N8 (1 speed only) FL6NS8 (2 speed only)	Azimuth and X Value Adjustment of Audio Control Head / Adjustment of Envelope Waveform
J-2	Guide Roller Adj.Screwdriver	Available Locally	Guide Roller
J-3	Mirror	Available Locally	Tape Transportation Check
J-4	Azimuth Adj.Screwdriver +	Available Locally	A/C Head Height
J-5	X Value Adj.Screwdriver -	Available Locally	X Value

# MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

## 4-4-1 Service Information

### A. Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

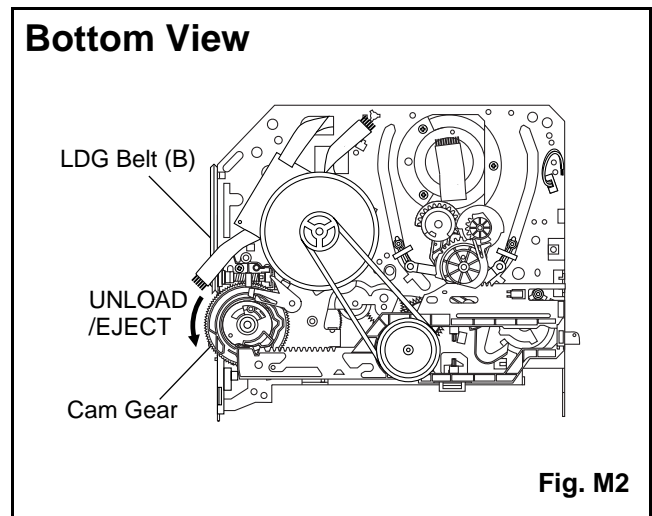
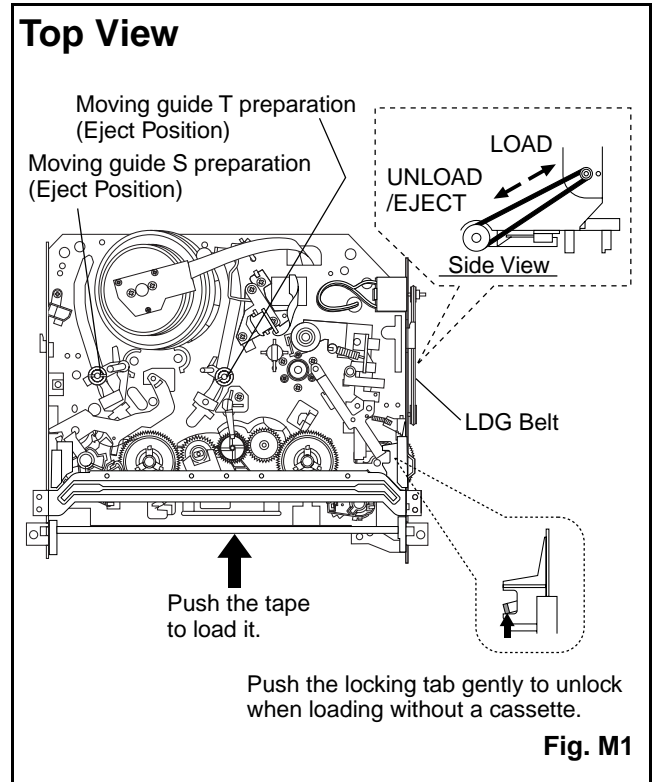
1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 for a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Make sure that the Moving guide preparations are in the Eject Position.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 until the Moving guide preparations come to the Eject Position. Stop turning when the preparations begin clicking or can not be moved further. However, the tape will be left wound around the cylinder.
5. Turn the LDG Belt in the appropriate direction continuously, and the cassette tape will be ejected. Allow a minute or two to complete this task.

### B. Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Case and Front Assembly.
3. Turn the LDG Belt in the appropriate direction shown in Fig. M1. Release the locking tabs shown in Fig. M1 and continue turning the LDG Belt until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.





# 1.Tape Interchangeability Alignment

Note:

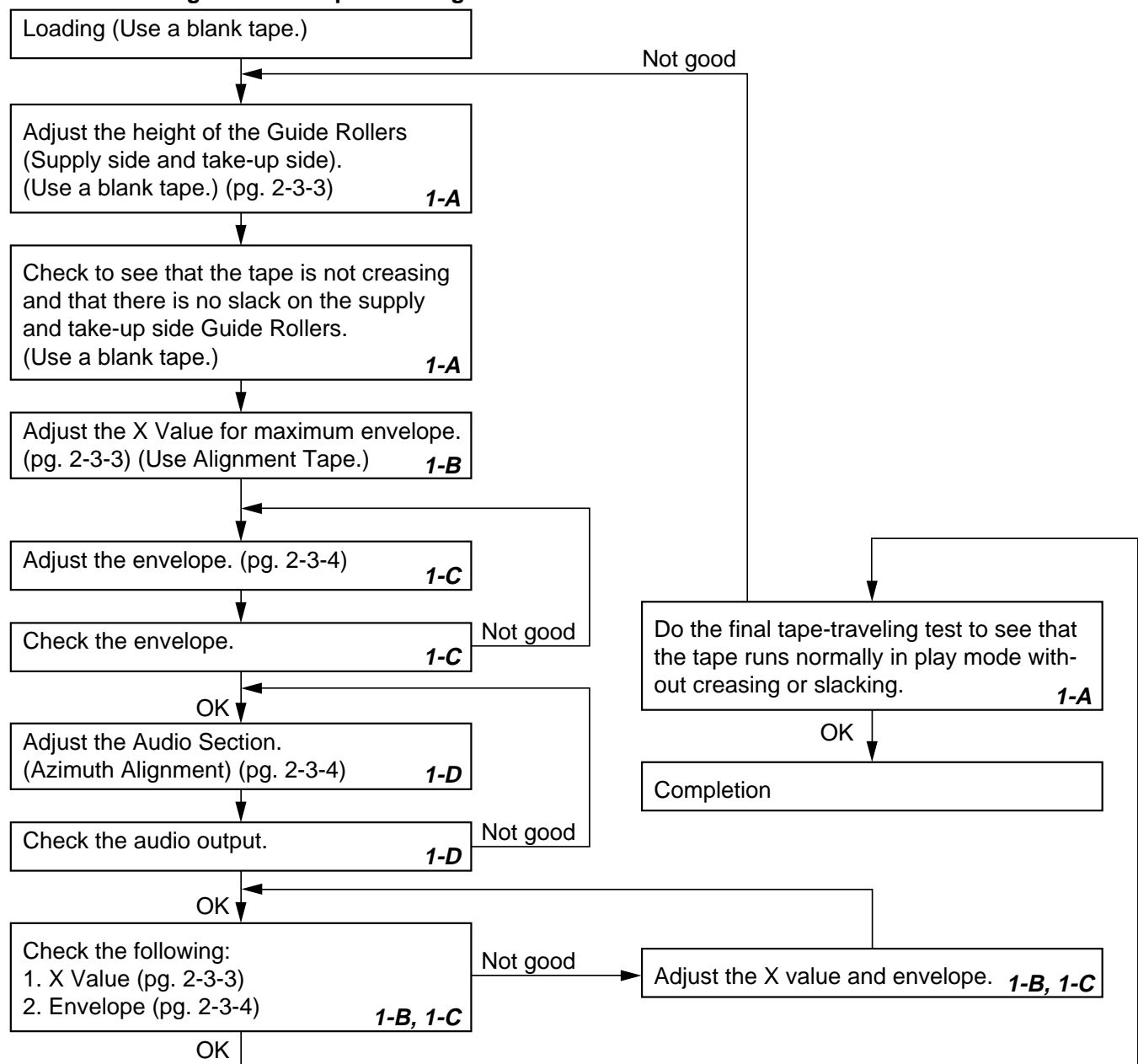
To do these alignment procedures, make sure that the Tracking Control Circuit is set to the center position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 2.)

## Equipment required:

- Dual Trace Oscilloscope
- VHS Alignment Tape (FL6NS8)
- Guide Roller Adj. Screwdriver
- X-Value Adj. Screwdriver

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

## Flowchart of Alignment for tape traveling



## 1-A. Preliminary/Final Checking and Alignment of Tape Path

### Purpose:

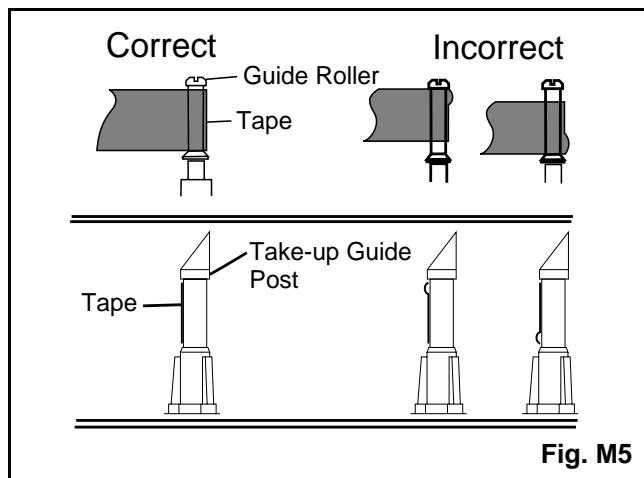
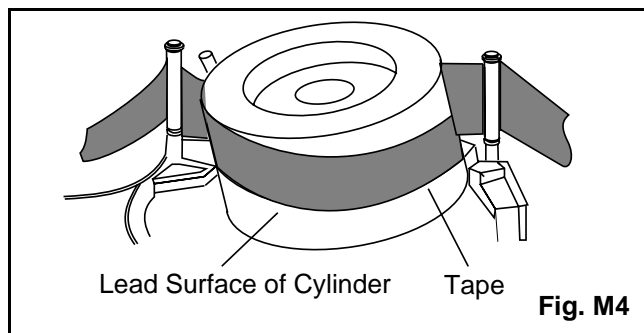
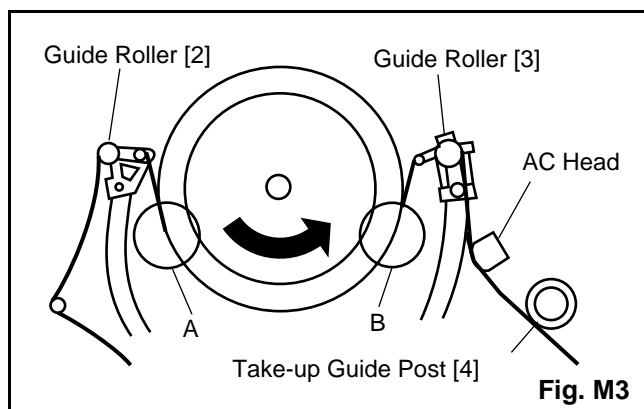
To make sure that the tape path is well stabilized.

### Symptom of Misalignment:

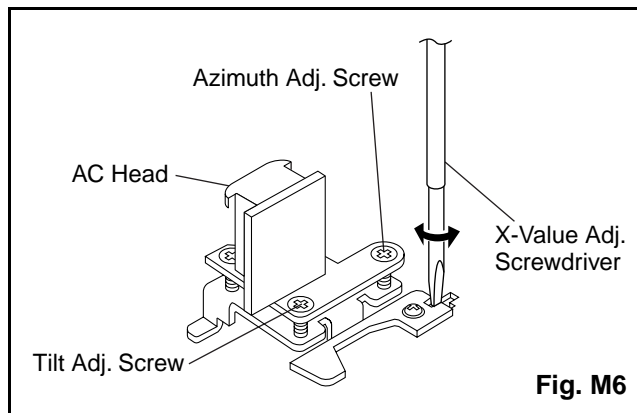
If the tape path is unstable, the tape will be damaged.

**Note:** Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Playback a blank cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig M3 and M4.)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5.)



3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and AC Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the AC Head. (Fig. M6)



## 1-B. X Value Alignment

### Purpose:

To align the Horizontal Position of the Audio/Control/ Erase Head.

### Symptom of Misalignment:

If the Horizontal Position of the Audio/Control/Erase Head is not properly aligned, maximum envelope cannot be obtained at the Neutral position of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) and TP503 (CTL) on the Main CBA. Use TP504 (RF-SW) as a trigger.
2. Playback the Gray Scale of the Alignment Tape (FL6NS8) and confirm that the PB FM signal is present.
3. Set the Tracking Control Circuit to the center position by pressing CH UP button then "PLAY" button on the unit. (Refer to note on bottom of page 2-3-4.)
4. Use the X-Value Adj. Screwdriver so that the PB FM signal at TP301 (C-PB) is maximum. (Fig. M6)
5. Press CH UP button on the unit until the CTL waveform has shifted by approx. +2msec. Make sure that the envelope is simply attenuated (shrinks in height) during this process so that you will know the envelope has been at its peak.

6. Press CH DOWN button on the unit until the CTL waveform has shifted from its original position (not the position achieved in step 5, but the position of CTL waveform in step 4) by approximately -2msec. Make sure that the envelope is simply attenuated (shrinks in height) once CTL waveform passes its original position and is further brought in the minus direction.
7. Set the Tracking Control Circuit to the center position by pressing CH UP button and then "PLAY" button.

### 1-C. Checking/Adjustment of Envelope Waveform

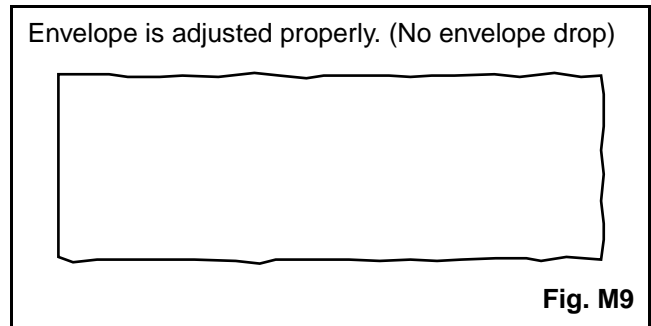
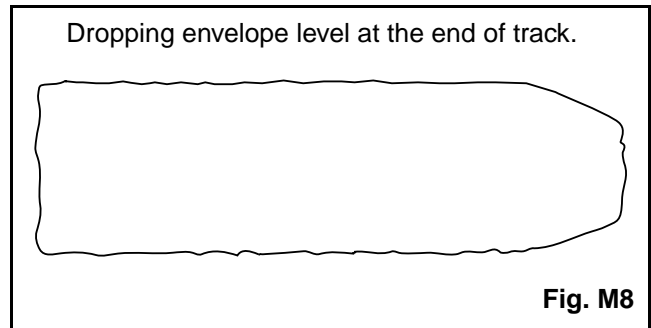
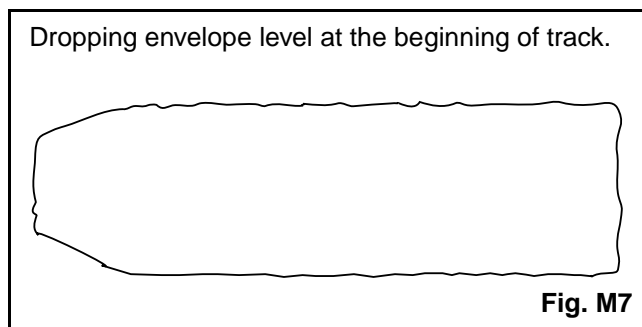
#### Purpose:

To achieve a satisfactory picture and precise tracking.

#### Symptom of Misalignment:

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) on the Main CBA. Use TP504 (RF-SW) as a trigger.
2. Playback the Gray Scale on the Alignment Tape (FL6NS8). Set the Tracking Control Circuit to the center position by pressing CH UP button and then "PLAY" button on the unit. Adjust the height of Guide Rollers [2] and [3] (Fig. M3, Page 2-3-3) watching the oscilloscope display so that the envelope becomes as flat as possible. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
3. If the envelope is as shown in Fig. M7, adjust the height of Guide Roller [2] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
4. If the envelope is as shown in Fig. M8, adjust the height of Guide Roller [3] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
5. When Guide Rollers [2] and [3] (Refer to Fig. M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M9.



Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), check the X Value by pushing the CH UP or DOWN buttons alternately, to check the symmetry of the envelope. Check the number of pushes to ensure center position. The number of pushes CH UP button to achieve 1/2 level of envelope should match the number of pushes CH DOWN button from center. If required, redo the "X Value Alignment."

### 1-D. Azimuth Alignment of Audio/Control/Erase Head

#### Purpose:

To correct the Azimuth alignment so that the Audio/Control/Erase Head meets tape tracks properly.

#### Symptom of Misalignment:

If the position of the Audio/Control/Erase Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Playback the alignment tape (FL6NS8) and confirm that the audio signal output level is 8kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform on the oscilloscope is at maximum. (Fig. M6)

# DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Before following the procedures described below, be sure to remove the deck assembly from the cabinet. (Refer to CABINET DISASSEMBLY INSTRUCTIONS on page 1-6-1.)

All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [44] and [45] in Fig. DM1 on page 2-4-3. When reassembling, follow the steps in reverse order.

STEP /LOC. No.	START- ING No.	PART		Fig. No.	REMOVAL	INSTALLATION
					REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Guide Holder A	T	DM3	2(S-1)	
[2]	[1]	Cassette Holder Assembly	T	DM4		
[3]	[2]	Slider (SP)	T	DM5	*(L-1)	
[4]	[2]	Slider (TU)	T	DM5	*(L-2)	
[5]	[4]	Lock Lever	T	DM5	*(L-3), *(P-1)	
[6]	[2]	Cassette Plate	T	DM5		
[7]	[7]	Cylinder Assembly	T	DM1,DM6	Desolder, 3(S-2)	
[8]	[8]	Loading Motor Assembly	T	DM1,DM7	Desolder, LDG Belt, 2(S-3)	
[9]	[9]	AC Head Assembly	T	DM1,DM7	(S-4)	
[10]	[2]	Tape Guide Arm Assembly	T	DM1,DM8	*(P-2)	
[11]	[10]	C Door Opener	T	DM1,DM8	*(L-4)	
[12]	[11]	Pinch Arm (B)	T	DM1,DM8	*(P-3)	
[13]	[12]	Pinch Arm Assembly	T	DM1,DM8		
[14]	[14]	FE Head Assembly	T	DM1,DM9	(S-5)	
[15]	[15]	Prism	T	DM1,DM9	(S-6)	
[16]	[2]	Slider Shaft	T	DM10	*(L-5)	
[17]	[16]	C Drive Lever (SP)	T	DM10		
[18]	[16]	C Drive Lever (TU)	T	DM10	(S-7), *(P-4)	
[19]	[19]	Capstan Motor	B	DM2,DM11	3(S-8), Cap Belt	
[20]	[20]	Clutch Assembly (HI)	B	DM2,DM12	(C-1)	
[21]	[20]	Center Gear	B	DM12		
[22]	[22]	F Brake Assembly (HI)	B	DM2,DM12	*(L-6)	
[23]	[22]	Worm Holder	B	DM2,DM13	(S-9), *(L-7), *(L-8)	
[24]	[22]	Pulley Assembly (HI)	B	DM2,DM13		
[25]	[25]	Mode Gear	B	DM2,DM13	(C-2)	
[26]	[20],[25]	Mode Lever (HI)	B	DM2,DM13	(C-3)	
[27]	[22],[23], [26]	Cam Gear (A) (HI)	B	DM2,DM13	(C-4)	(+)Refer to Alignment Sec.Pg.2-4-8
[28]	[26]	TR Gear C	B	DM2,DM13	(C-5)	
[29]	[28]	TR Gear Spring	B	DM13		
[30]	[29]	TR Gear A/B	B	DM13		
[31]	[31]	FF Arm (HI)	B	DM1,DM13		
[32]	[26]	Idler Assembly (HI)	B	DM1,DM14	*(L-9)	
[33]	[26]	BT Arm	B	DM2,DM14	*(P-5)	

STEP /LOC. No.	START- ING No.	PART		Fig. No.	REMOVAL	INSTALLATION
					REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[34]	[26]	Loading Arm (SP) Assembly	B	DM2,DM14		(+)Refer to Alignment Sec.Pg.2-4-8
[35]	[34]	Loading Arm (TU) Assembly	B	DM2,DM14		(+)Refer to Alignment Sec.Pg.2-4-8
[36]	[16],[26]	M Brake (TU) Assembly (HI)	T	DM1,DM15		
[37]	[2],[26]	M Brake (SP) Assembly (HI)	T	DM1,DM15	*(P-6)	
[38]	[37]	Tension Lever Assembly	T	DM1,DM15		
[39]	[38]	T Lever Holder	T	DM15	*(L-10)	
[40]	[40]	M Gear (HI)	T	DM1,DM15	(C-6)	
[41]	[15],[40]	Sensor Gear (HI)	T	DM1,DM15	(C-7)	
[42]	[36],[40]	Reel T	T	DM1,DM15		
[43]	[38]	Reel S	T	DM1,DM15		
[44]	[34],[38]	Moving Guide S Preparation	T	DM1,DM16		
[45]	[35]	Moving Guide T Preparation	T	DM1,DM16		
[46]	[19]	TG Post Assembly	T	DM1,DM16	*(L-11)	
[47]	[27]	Rack Assembly	R	DM17		(+)Refer to Alignment Sec.Pg.2-4-8
[48]	[47]	F Door Opener	R	DM17		
[49]	[49]	Cleaner Assembly	T	DM1,DM6		
[50]	[49]	CL Post	T	DM6	*(L-12)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1): Follow steps in sequence. When reassembling, follow the steps in reverse order.

These numbers are also used as identification (location) No. of parts in the figures.

(2): Indicates the part to start disassembling with in order to disassemble the part in column (1).

(3): Name of the part

(4): Location of the part: T=Top B=Bottom R=Right L=Left

(5): Figure Number

(6): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

P=Spring, W=Washer, C=Cut Washer, S=Screw, \*=Unhook, Unlock, Release, Unplug, or Desolder

e.g., 2(L-2) = two Locking Tabs (L-2).

(7): Adjustment Information for Installation

(+):Refer to Deck Exploded Views for lubrication.

Top View

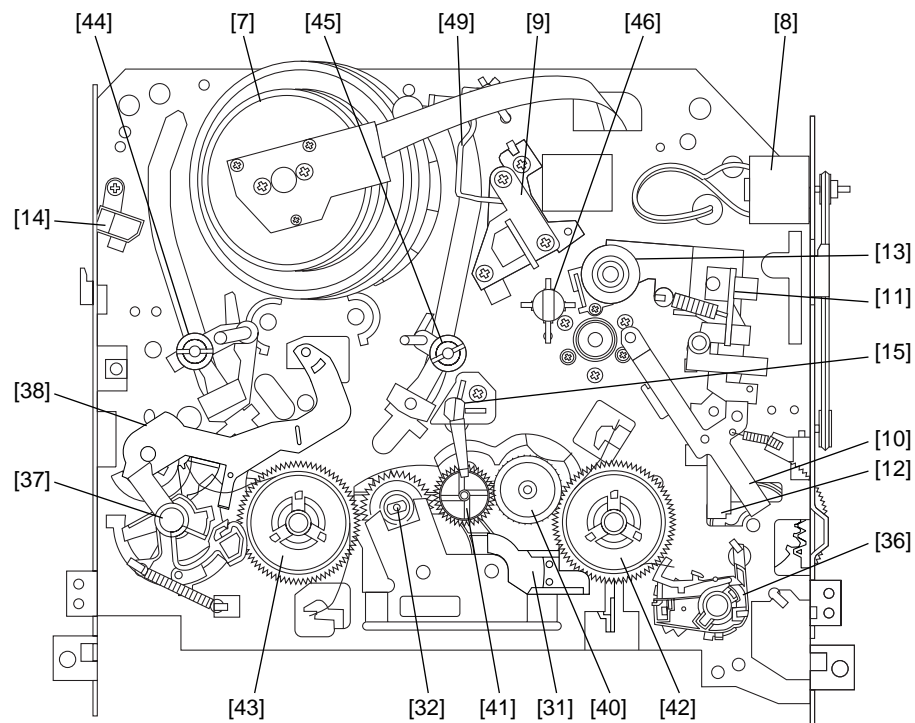


Fig. DM1

Bottom View

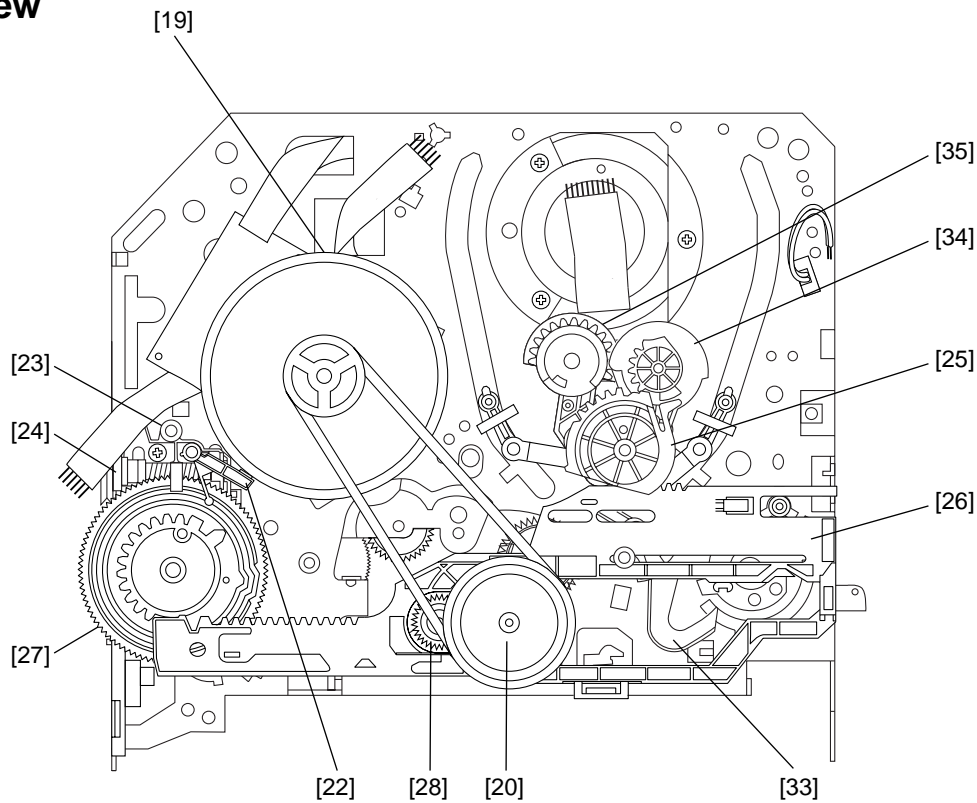
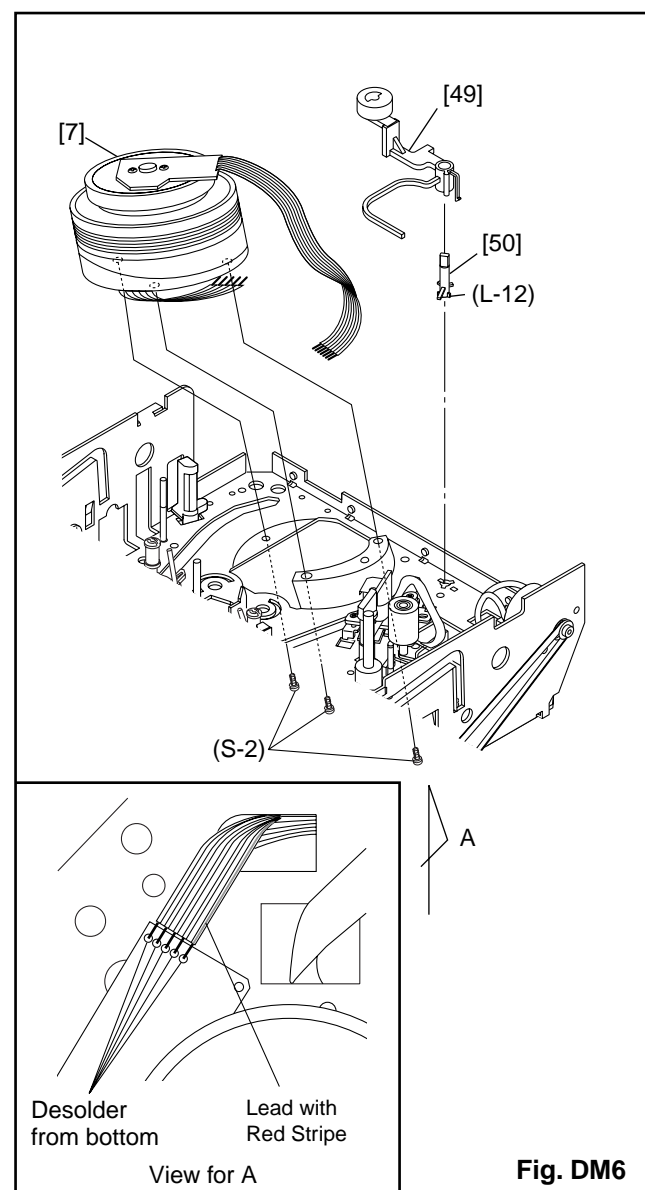
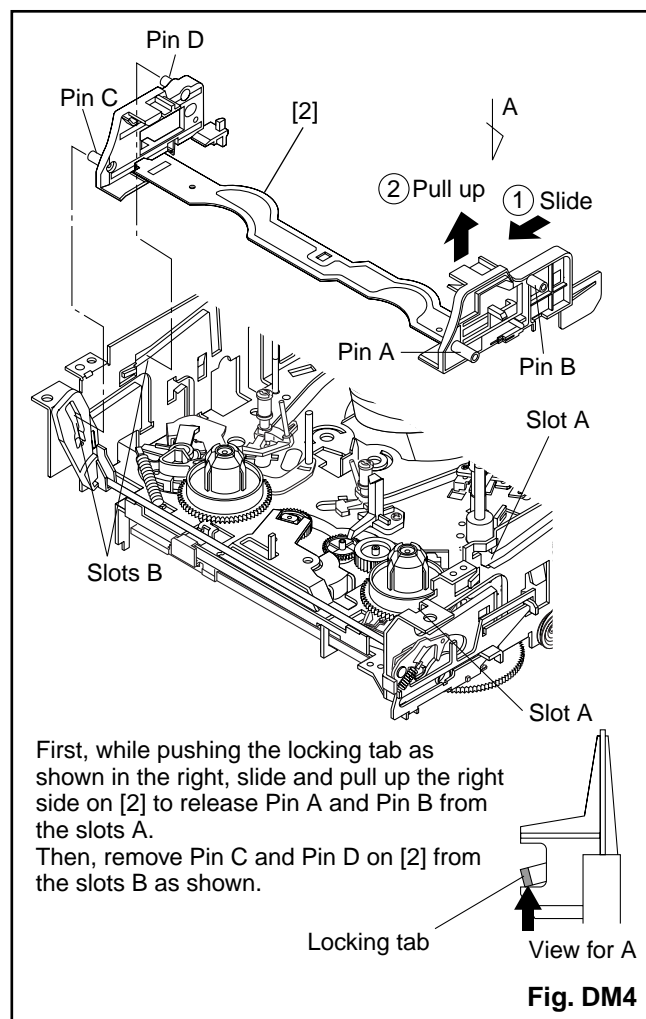
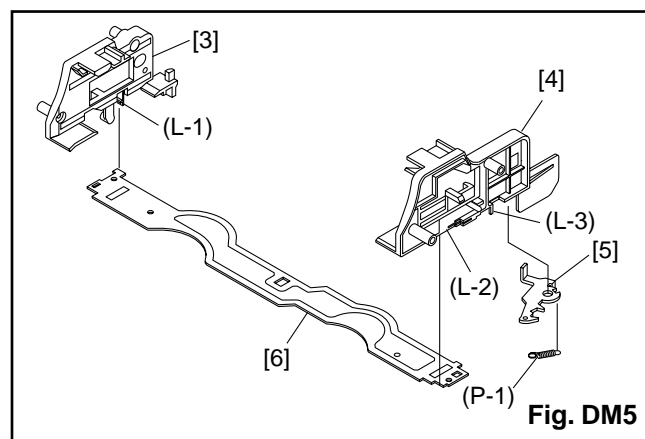
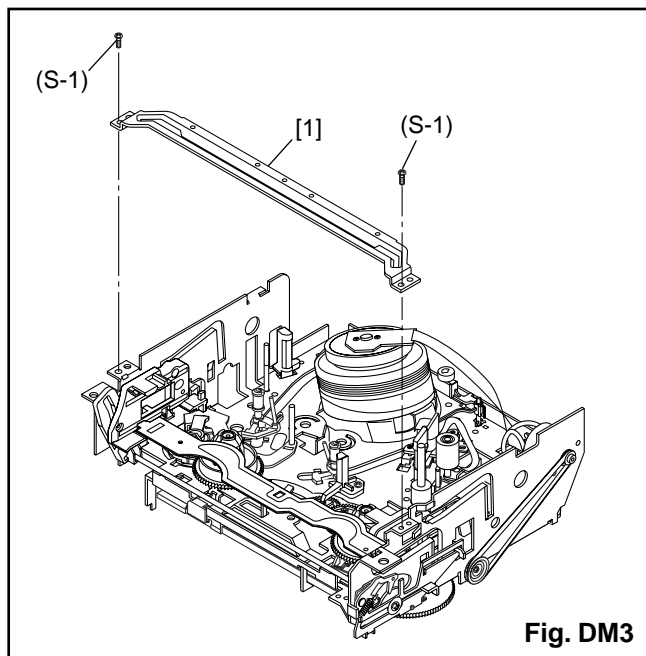
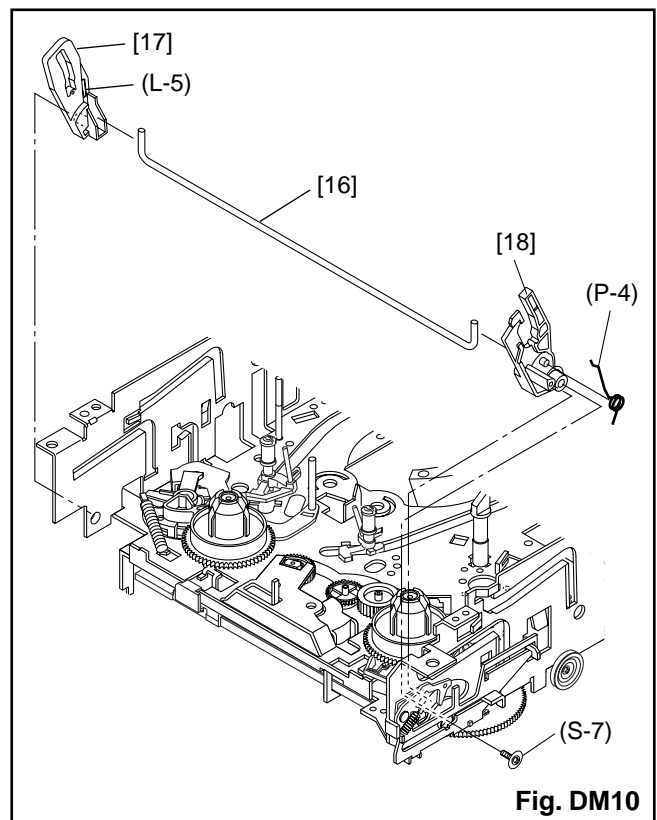
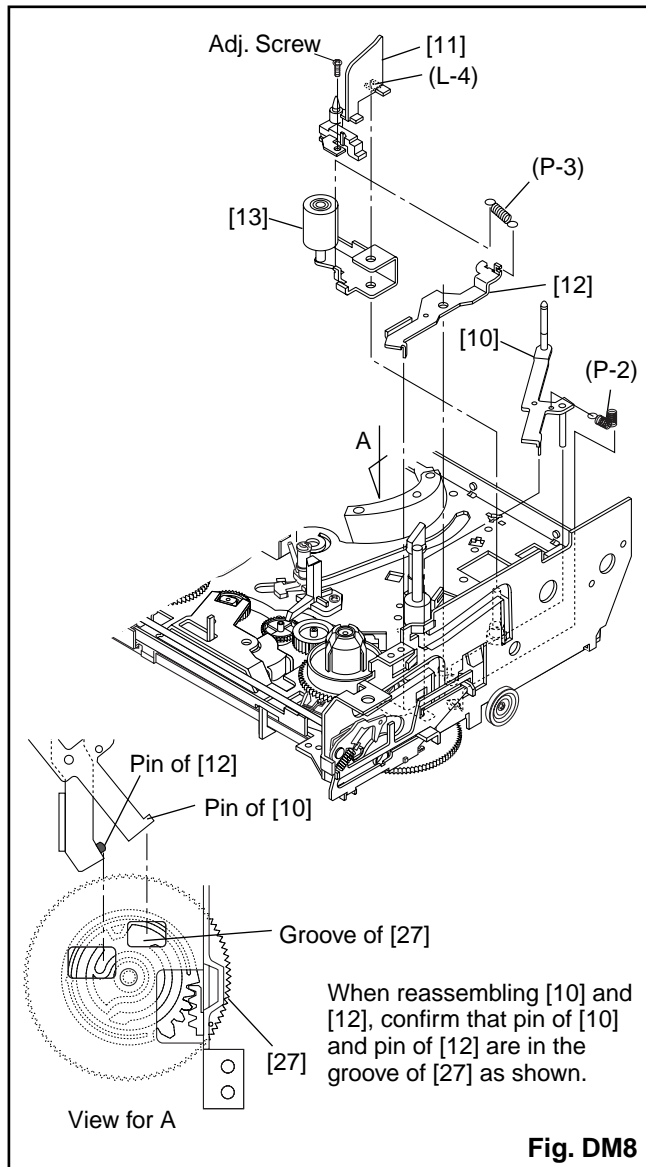
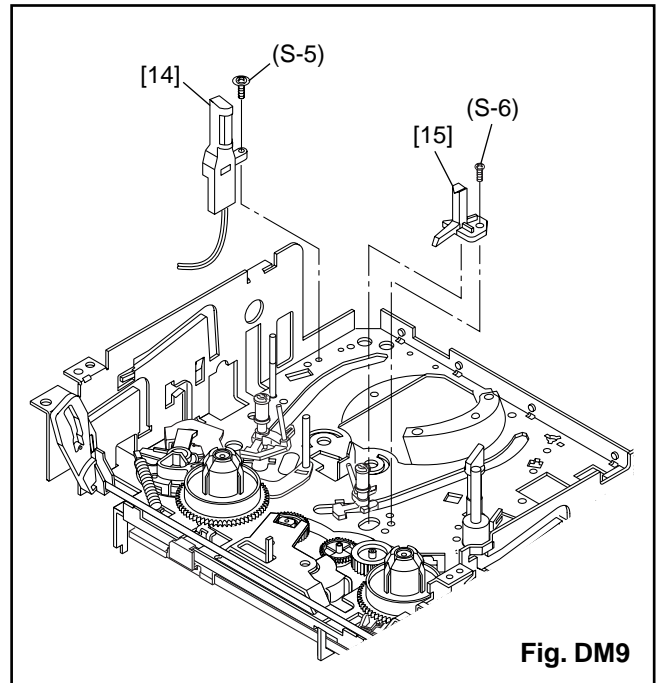
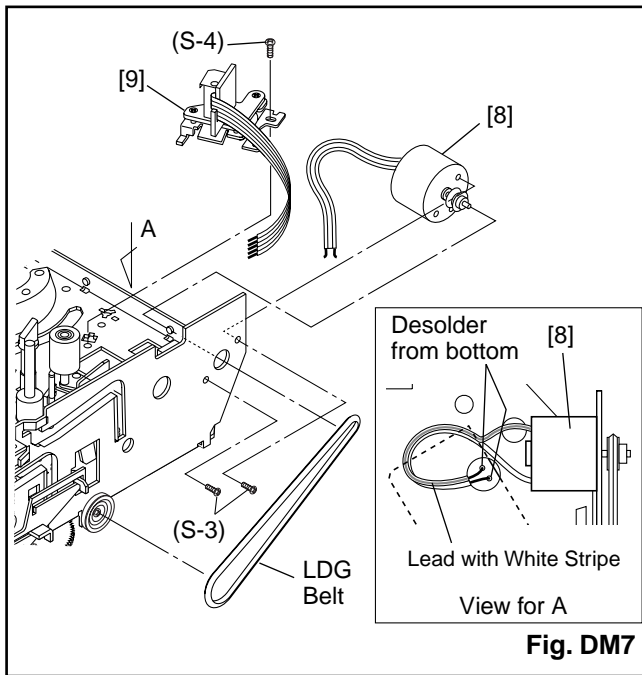
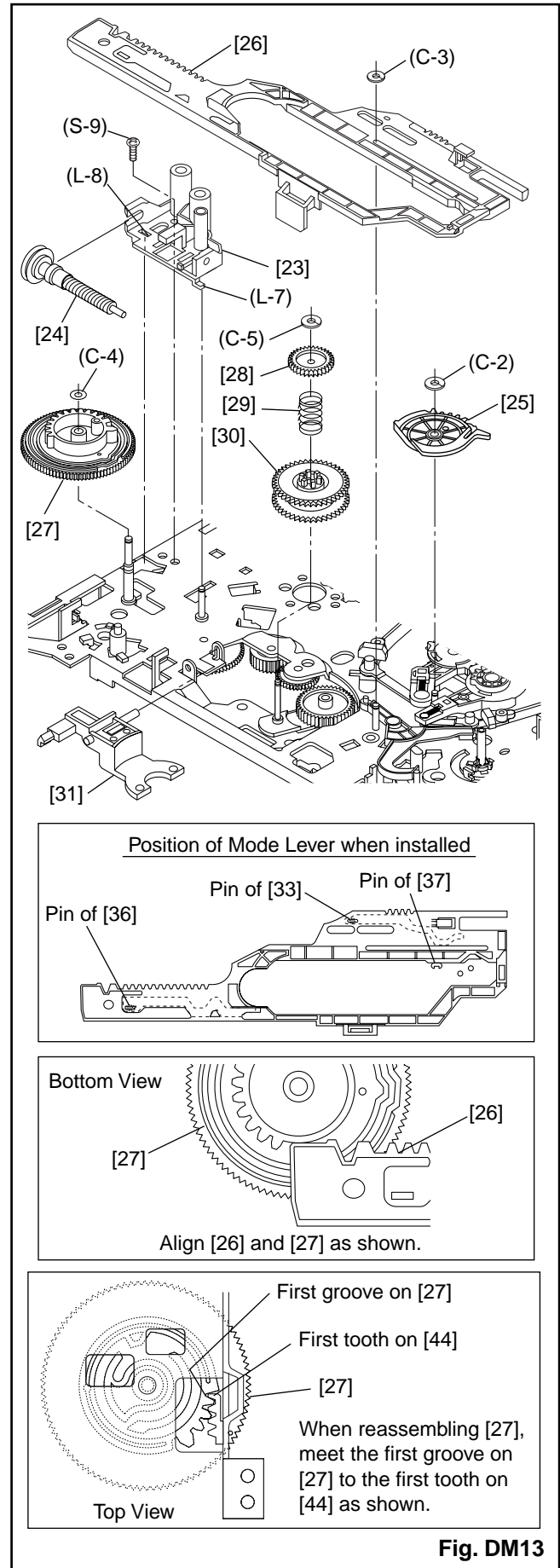
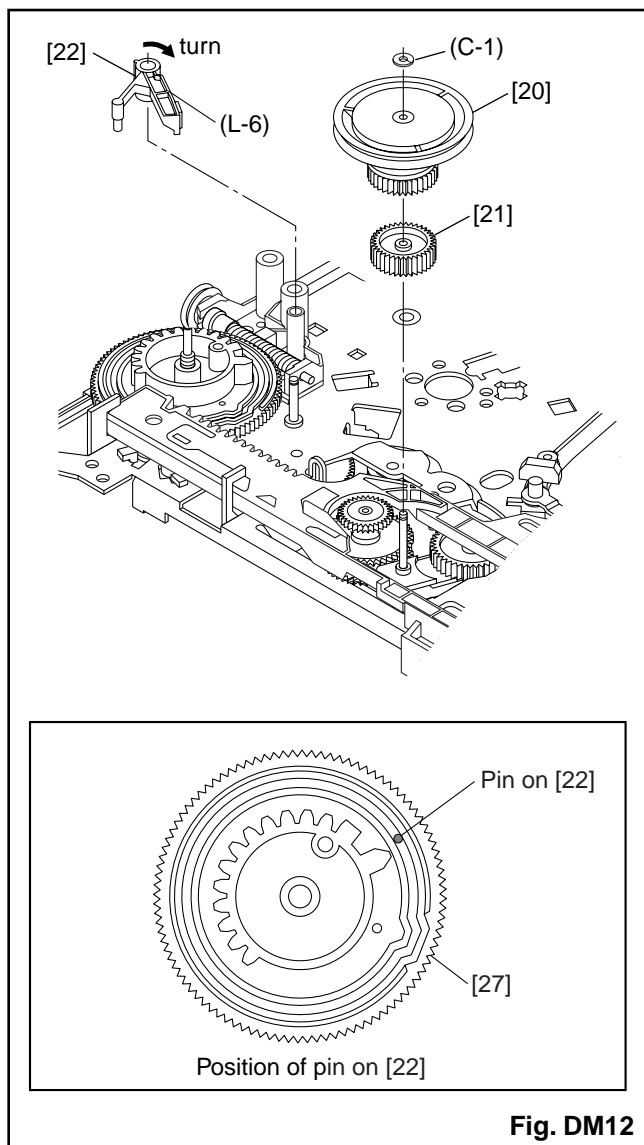
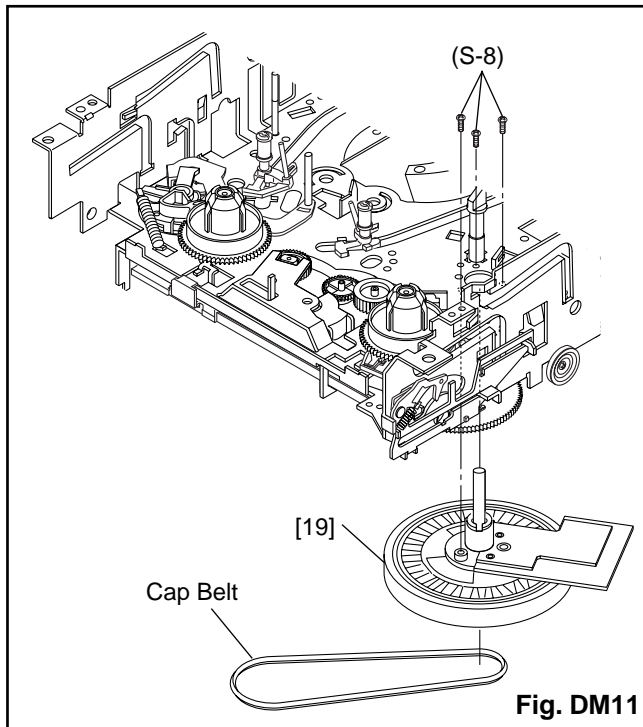


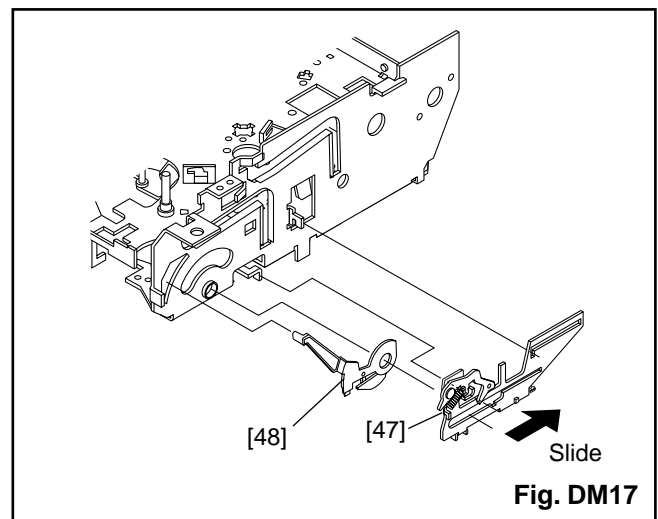
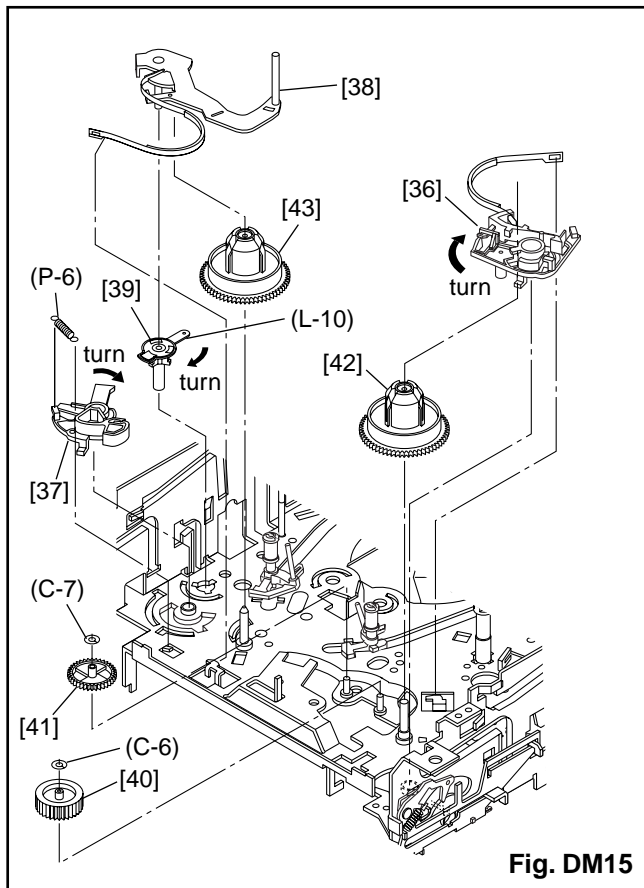
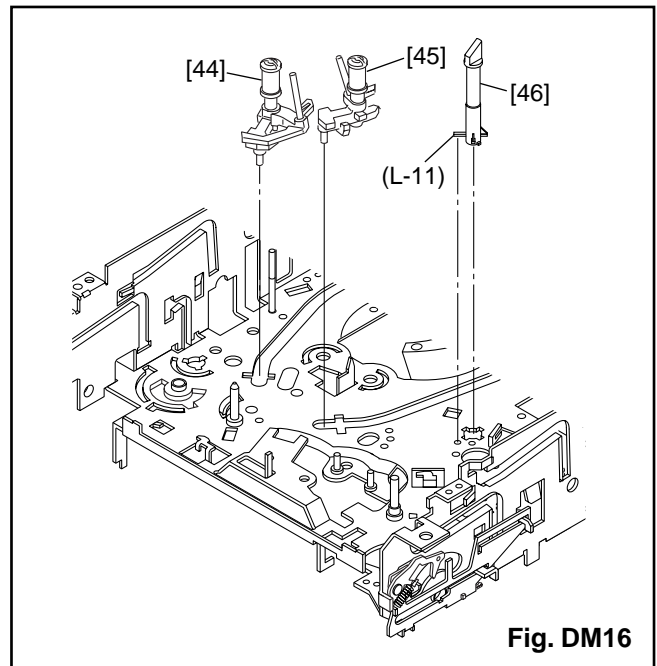
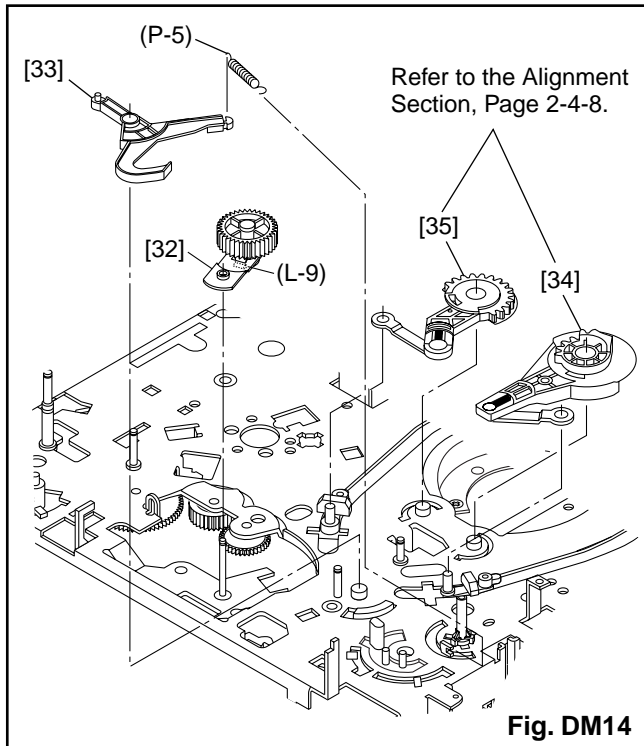
Fig. DM2











# ALIGNMENT PROCEDURES OF MECHANISM

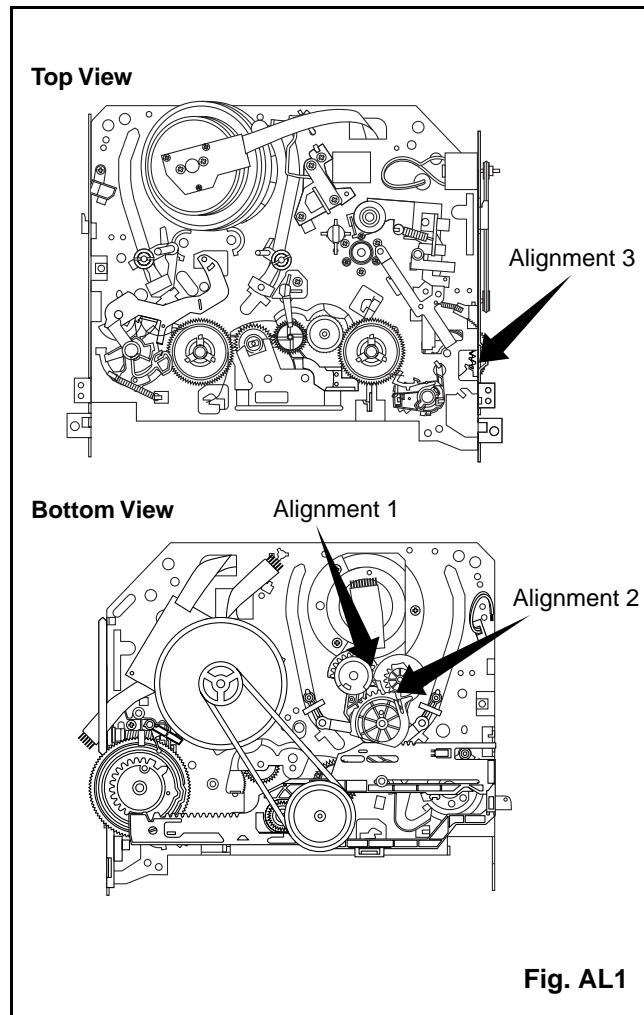
The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.

**All alignments are to be performed with the mechanism in Eject mode**, in the sequence given. Each procedure assumes that all previous procedures have been completed.

## IMPORTANT:

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

## Alignment points in Eject Position



## Alignment 1

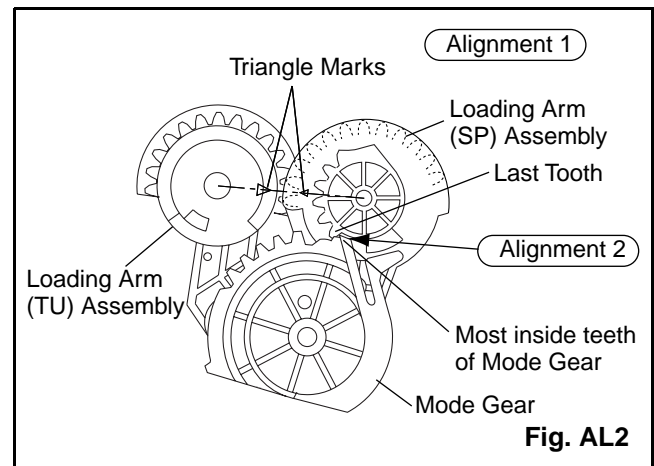
### Loading Arm (SP) and (TU) Assembly

Install Loading Arm (SP) and (TU) Assembly so that their triangle marks point to each other as shown in Fig. AL2.

## Alignment 2

### Mode Gear

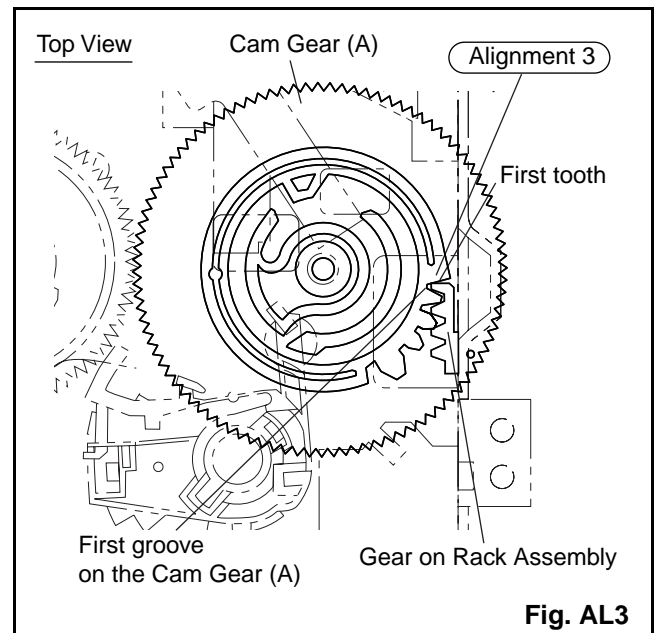
Keeping the two triangles pointing at each other, install the Loading Arm (TU) Assembly so that the last tooth of the gear meets the most inside teeth of the Mode Gear. See Fig. AL2.



## Alignment 3

### Cam Gear (A) (HI), Rack Assembly

Install the Rack Assembly so that the first tooth on the gear of the Rack Assembly meets the first groove on the Cam Gear (A) (HI) as shown in Fig. AL3.



# EXPLODED VIEWS AND PARTS LIST SECTION

## DVD PLAYER & VIDEO CASSETTE RECORDER DPVR-4600/DPVR-4800

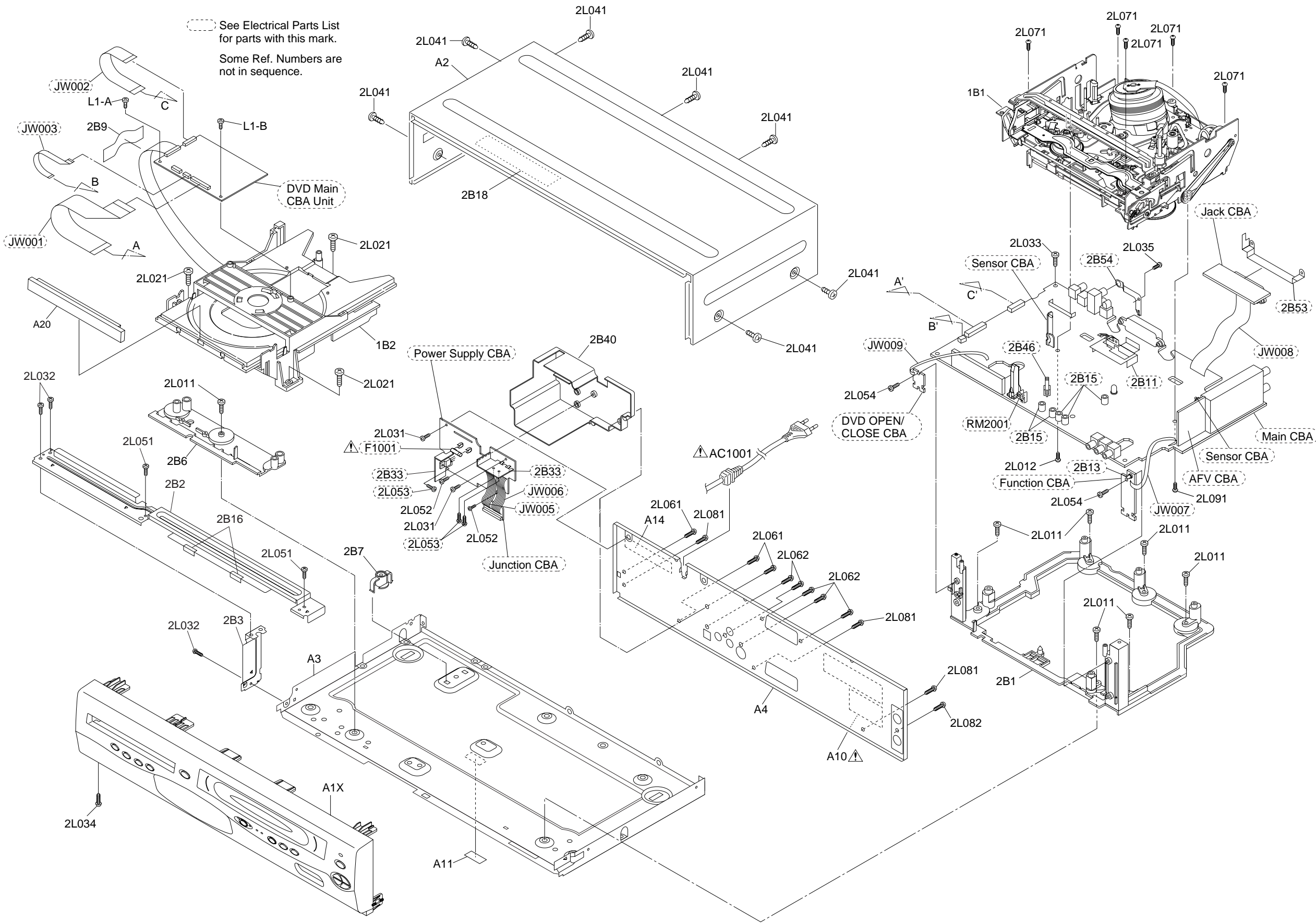
<b>Sec. 3: Exploded views and Parts List Section</b>
● Exploded views
● Parts List

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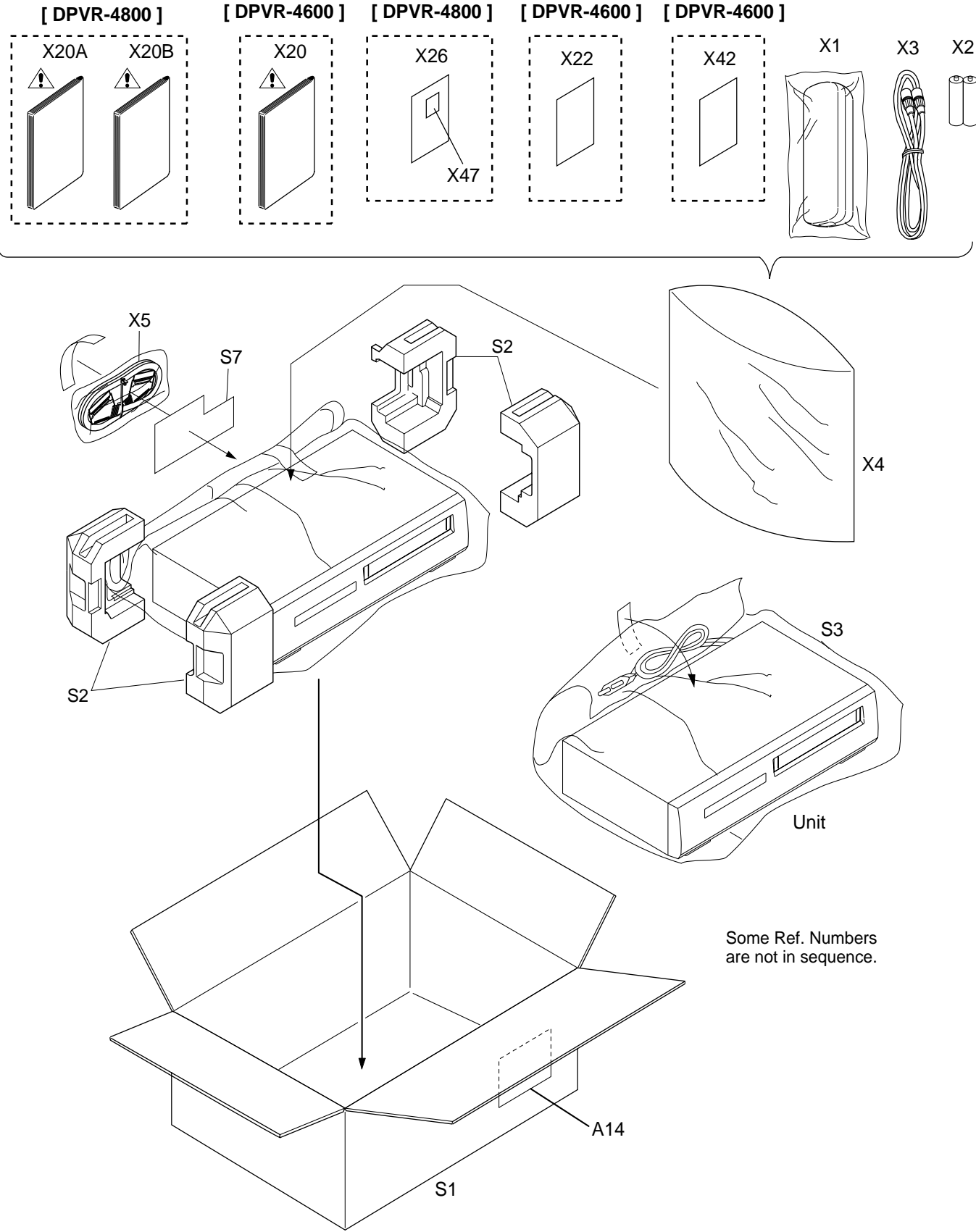
Exploded Views .....	3-1-1
Mechanical Parts List .....	3-2-1
Electrical Parts List .....	3-3-1
Deck Parts List .....	3-4-1

EXPLODED VIEWS

Cabinet



Packing

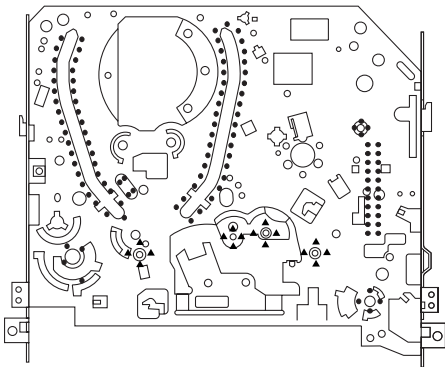
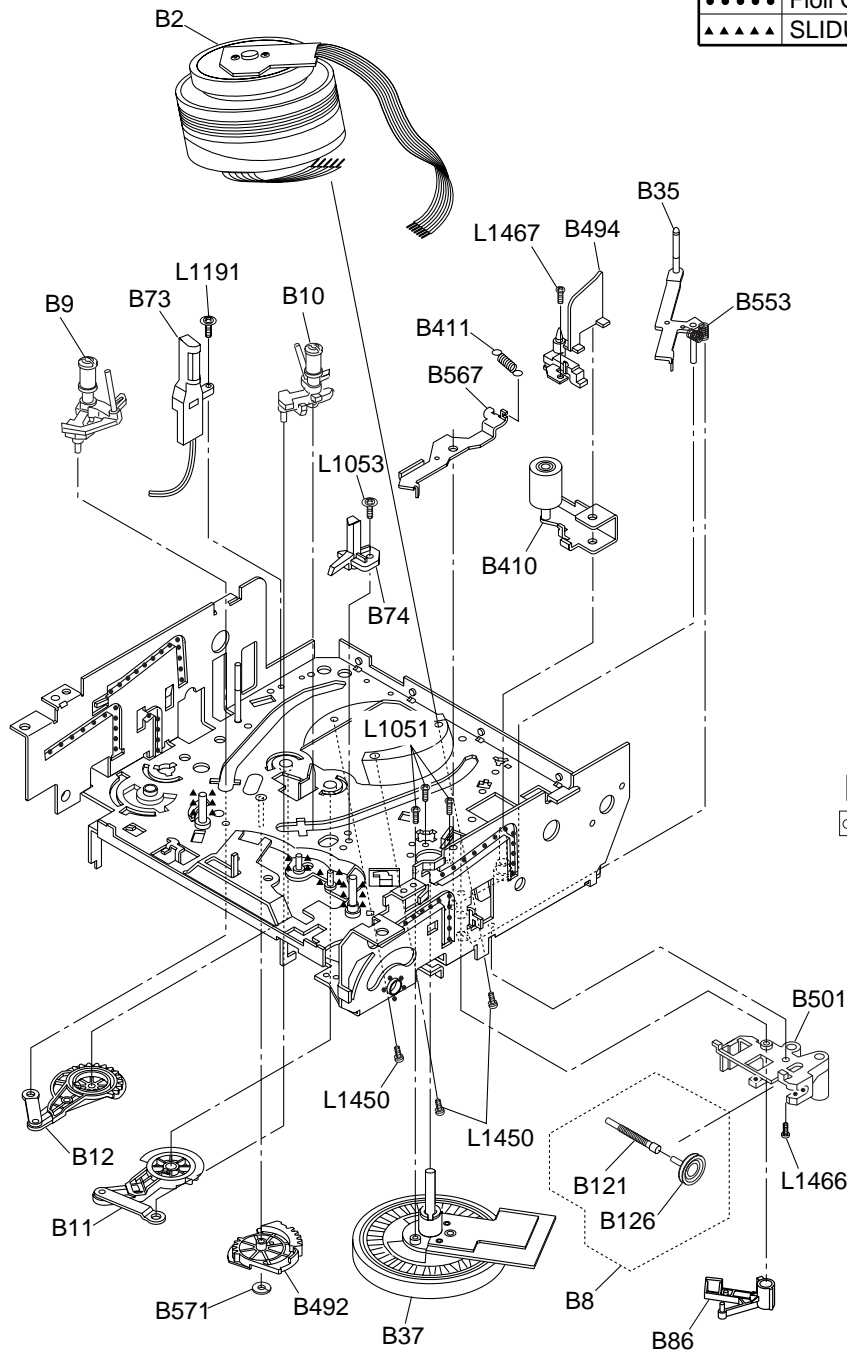




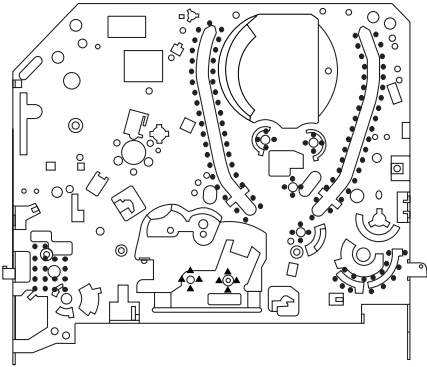
# DECK EXPLODED VIEWS

## Deck Mechanism View 1

Mark	Description
.....	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲	SLIDUS OIL #150



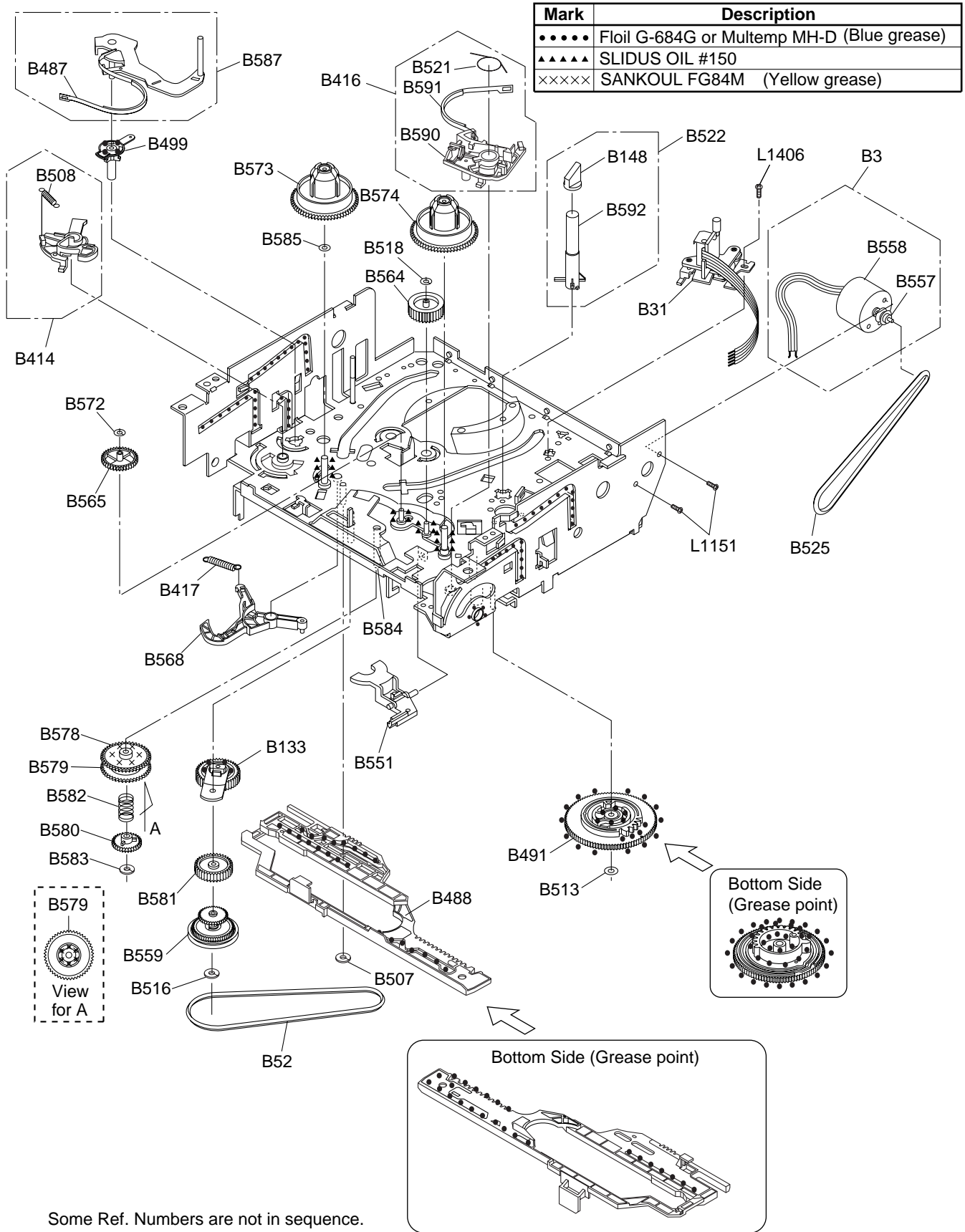
Chassis Assembly  
Top View (Lubricating Point)



Chassis Assembly  
Bottom View (Lubricating Point)

Some Ref. Numbers are not in sequence.

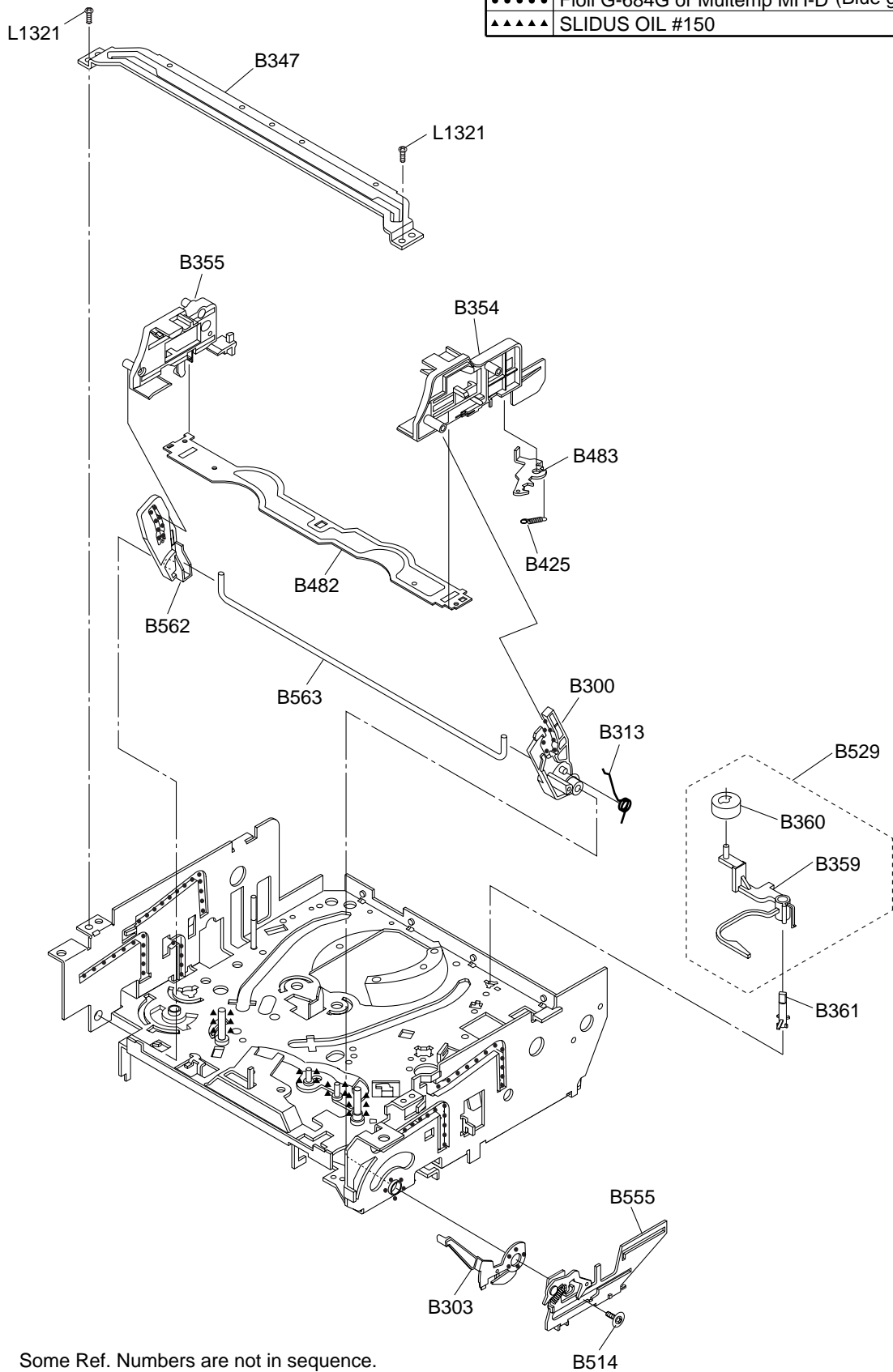
# Deck Mechanism View 2






Deck Mechanism View 3

Mark	Description
•••••	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲▲	SLIDUS OIL #150



# MECHANICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

**NOTE:**

Parts that are not assigned part numbers (-----) are not available.


## Comparison Chart of Models and Marks

Model	Mark
DPVR-4600	A
DPVR-4800	B

Ref. No.	Mark	Description	Part No.
A1X	A	FRONT ASSEMBLY H9510ED	0VM204097
A1X	B	FRONT ASSEMBLY H9514ED	0VM204220
A2		TOP COVER H9400UD	0VM101208
A3		CHASSIS(E4+U27) H9400UD	0VM101207A
A4		PANEL, REAR H9510ED	0VM204130
A10 	A	LABEL, RATING H9510ED	-----
A10 	B	LABEL, RATING H9514ED	-----
A11		LABEL, RESET H9300ED	-----
A14		LABEL, SERIAL NO. HE240ED	-----
A14	A	LABEL, BAR CODE H9510ED	-----
A14	B	LABEL, BAR CODE H9514ED	-----
A20		PANEL, TRAY H9415JD	0VM414998
1B1		DECK ASSEMBLY CZD012/VM17E0	N17E0FL
1B2		DVD MECHA 0838 VCDVM040	N79F0GVM
2B1		DECK PEDESTAL-1 H9400UD	0VM101201A-1
2B2		TOP BRACKET H9100UD	0VM203252A
2B3		SIDE BRACKET H9100UD	0VM305013
2B6		DECK PEDESTAL-2 H9400UD	0VM101201A-2
2B7		DECK PEDESTAL-3 H9400UD	0VM101201A-3
2B9		TAPE, HIMELON(40*20) H9500ED	0VM415545
2B16		TAPE, HIMELON H9206JD	0VM413956
2B18		FIBER, TOP CASE HC460ED	0VM412906
2B40		INSULATOR H9500ED	0VM306050
2L011		SCREW, S-TIGHT M3X8 BIND + CHROME	GBMS3080
2L012		SCREW, S-TIGHT M3X8 BIND + CHROME	GBMS3080
2L021		SCREW, S-TIGHT M3X26 H9400UD	0VM414507
2L031		SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
2L032		SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
2L033		SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
2L034		SCREW, S-TIGHT M3X6 BIND HEAD+	GBMS3060
2L035		SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
2L041		SCREW, C-TIGHT M3X5 BIND HEAD +	GBCC3050
2L051		SCREW, P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L052		SCREW, P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L054		SCREW, P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L061		SCREW, B-TIGHT M3X8 BIND HEAD +	GBKB3080
2L062		SCREW, B-TIGHT M3X8 BIND HEAD +	GBKB3080
2L071		SCREW, P-TIGHT M3X10 WASHER HEAD+	GCMP3100
2L081		SCREW, S-TIGHT M3X5 BIND HEAD +	GBKS3050

Ref. No.	Mark	Description	Part No.
2L082		SCREW, S-TIGHT M3X5 BIND HEAD +	GBKS3050
2L091		SCREW, P-TIGHT M3X8 BIND HEAD+	GBCP3080
<b>PACKING</b>			
S1	A	GIFT BOX CARTON H9510ED	0VM306161
S1	B	GIFT BOX CARTON H9514ED	0VM306294
S2		STYROFOAM(2) H9100UD	0VM203377C
S3		UNIT, BAG E5500UD	0VM411683
S7		21P PAD HC463FD	0VM413384
<b>ACCESSORIES</b>			
X1		REMOTE CONTROL UNIT 364/CRC007	NA214ED
X2		DRY BATTERY R6P/2S or	XB0M451T0001
		DRY BATTERY ES-GR6M-C	XB0M571GLP01
X3		RF CORD PAL 1.2M or	WPZ0122LG001
		RF CABLE CC1001020012010	WPZ0122LW001
X4		ACCESSORY BAG K8092BA	0VM404632
X5		21P CABLE(BYR SUPPLY) H9300ED	0VMN03276
X20 	A	OWNER'S MANUAL H9510ED	0VMN03502
X20A 	B	OWNER'S MANUAL(SPANISH) H9514ED	0VMN03641
X20B 	B	OWNER'S MANUAL(PORTUGUESE)H9514ED	0VMN03642
X22	A	SERVICE CENTER LIST HC2C0ED	0VMN03071
X26	B	WARRANTY CARD(SPANISH) HE245ED	0VMN03636
X42	A	ADDENDUM SHEET H9500ED	0VMN03760
X47	B	LABEL, SERIAL NO. H9500ED	-----

# ELECTRICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

## NOTES:

- Parts that are not assigned part numbers (-----) are not available.
- Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25%    D.....±0.5%    F.....±1%  
 G.....±2%    J.....±5%    K.....±10%  
 M.....±20%    N.....±30%    Z.....+80/-20%

- LED Type:

When it is necessary to replace one or more of the following diodes, all four should be replaced: D501, D502, D503, and D504 on the Main CBA.

## Comparison Chart of Models and Marks

Model	Mark
DPVR-4600	A
DPVR-4800	B

## DVD MAIN CBA UNIT

Ref. No.	Mark	Description	Part No.
	A	DVD MAIN CBA UNIT	N79GMGEP
	B	DVD MAIN CBA UNIT	N79GPGEP

## MCV CBA

Ref. No.	Mark	Description	Part No.
	A	MCV CBA	0VSA14058
	B	MCV CBA	0VSA14078
		Consists of the following	
		MAIN CBA (MCV-A)	-----
		FUNCTION CBA (MCV-B)	-----
		DVD OPEN/CLOSE CBA (MCV-C)	-----
		SENSOR CBA	0VSA14057

## MAIN CBA

Ref. No.	Mark	Description	Part No.
		MAIN CBA (MCV-A)	-----
		Consists of the following	
<b>CAPACITORS</b>			
C056		ELECTROLYTIC CAP. 47µF/25V M or	CE1EMASDL470
		ELECTROLYTIC CAP. 47µF/25V M	CE1EMASTL470
C057		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		ELECTROLYTIC CAP. 10µF/16V M	CE1CMASTL100
C058		ELECTRIC DOUBLE LAYER CAP. 0.047F/5.5V Z or	CA0J473NE003
		ELECTRIC DOUBLE LAYER CAP. 0.047F/5.5V Z	CA0J473MS014

Ref. No.	Mark	Description	Part No.
C059		ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
		ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASTL101
C060		CHIP CERAMIC CAP. B K 0.047µF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047µF/25V	CHD1EK30B473
C062		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C063		ELECTROLYTIC CAP. 47µF/16V M or	CE1CMASDL470
		ELECTROLYTIC CAP. 47µF/16V M	CE1CMASTL470
C068		CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
		CHIP CERAMIC CAP. CG J 470pF/50V	CHD1JJ3CG471
C104		ELECTROLYTIC CAP. 100µF/16V M or	CE1CMASDL101
		ELECTROLYTIC CAP. 100µF/16V M	CE1CMASTL101
C107		ELECTROLYTIC CAP. 470µF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470µF/6.3V M	CE0KMASTL471
C109		CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
		CHIP CERAMIC CAP. CG J 470pF/50V	CHD1JJ3CG471
C112		CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
		CHIP CERAMIC CAP. CG J 470pF/50V	CHD1JJ3CG471
C113		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C114		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C116		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C117		ELECTROLYTIC CAP. 1µF/50V M or	CE1JMASDL1R0
		ELECTROLYTIC CAP. 1µF/50V M	CE1JMASTL1R0
C118		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C127		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		ELECTROLYTIC CAP. 10µF/16V M	CE1CMASTL100
C129		ELECTROLYTIC CAP. 100µF/16V M H7	CE1CMAVSL101
C130		ELECTROLYTIC CAP. 4.7µF/50V M H7	CE1JMAVSL4R7
C131		ELECTROLYTIC CAP. 4.7µF/50V M H7	CE1JMAVSL4R7
C132		ELECTROLYTIC CAP. 4.7µF/50V M H7	CE1JMAVSL4R7
C251		ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMAVSL100
C252		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C253		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C254		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C301		CHIP CERAMIC CAP. B K 0.022µF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022µF/25V	CHD1EK30B223
C302		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C303		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C305		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C306		CHIP CERAMIC CAP. B K 0.047µF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047µF/25V	CHD1EK30B473
C307		CHIP CERAMIC CAP. B K 0.022µF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022µF/25V	CHD1EK30B223
C308		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C309		CHIP CERAMIC CAP. CH J 68pF/50V or	CHD1JJ3CH680
		CHIP CERAMIC CAP. CG J 68pF/50V	CHD1JJ3CG680
C310		CHIP CERAMIC CAP. CH J 68pF/50V or	CHD1JJ3CH680
		CHIP CERAMIC CAP. CG J 68pF/50V	CHD1JJ3CG680

Ref. No.	Mark	Description	Part No.
C311		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C312		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C313		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMASSL1R0
C314		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C315		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V	CHD1EK30B473
C316		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C317		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C319		CHIP CERAMIC CAP. CH J 68pF/50V or	CHD1JJ3CH680
		CHIP CERAMIC CAP. CG J 68pF/50V	CHD1JJ3CG680
C320		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C321		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C322		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C323		CHIP CERAMIC CAP. CH J 68pF/50V or	CHD1JJ3CH680
		CHIP CERAMIC CAP. CG J 68pF/50V	CHD1JJ3CG680
C324		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C325		CHIP CERAMIC CAP. B K 8200pF/50V	CHD1JK30B822
C326		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C328		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C329		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C330		ELECTROLYTIC CAP. 100μF/16V M H7	CE1CMAVSL101
C331		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C333		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C334		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C335		ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C336		CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1JJ3CH221
		CHIP CERAMIC CAP. CG J 220pF/50V	CHD1JJ3CG221
C337		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C339		CHIP CERAMIC CAP. CH J 120pF/50V or	CHD1JJ3CH121
		CHIP CERAMIC CAP. CG J 120pF/50V	CHD1JJ3CG121
C340		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C341		CHIP CERAMIC CAP. CH D 10pF/50V or	CHD1JD3CH100
		CHIP CERAMIC CAP. CG D 10pF/50V	CHD1JD3CG100
C342		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C343		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C344		ELECTROLYTIC CAP. 4.7μF/25V M NP H7	CP1EMAVSB4R7
C345		ELECTROLYTIC CAP. 0.47μF/50V M H7	CE1JMAVSLR47
C346		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C347		CHIP CERAMIC CAP. CH J 68pF/50V or	CHD1JJ3CH680
		CHIP CERAMIC CAP. CG J 68pF/50V	CHD1JJ3CG680
C348		CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZTFZ104

Ref. No.	Mark	Description	Part No.
C349		ELECTROLYTIC CAP. 0.47μF/50V M H7	CE1JMAVSLR47
C350		CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZTFZ104
C402		FILM CAP.(P) 0.018μF/50V J	CMA1JJP00183
C403		CERAMIC CAP. B K 470pF/100V	CCD2AKS0B471
C404		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMASSL221
C405		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C407		CHIP CERAMIC CAP. CH J 820pF/50V or	CHD1JJ3CH821
		CHIP CERAMIC CAP. CH J 820pF/25V or	CHD1EJ3CH821
		CHIP CERAMIC CAP. CG J 820pF/50V	CHD1JJ3CG821
C408		CHIP CERAMIC CAP. B K 1800pF/50V	CHD1JK30B182
C409		CHIP CERAMIC CAP. CH J 33pF/50V or	CHD1JJ3CH330
		CHIP CERAMIC CAP. CG J 33pF/50V	CHD1JJ3CG330
C410		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C411		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C412		ELECTROLYTIC CAP. 33μF/6.3V M H7	CE0KMAVSL330
C413		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C414		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C415		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C416		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JK30B472
C417		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C418		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C419		CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1JJ3CH221
		CHIP CERAMIC CAP. CG J 220pF/50V	CHD1JJ3CG221
C420		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C421		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C451		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C452		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C453		ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C454		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C455		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C456		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C457		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C458		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C461		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C462		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JK30B472
C463		ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C464		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C465		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C466		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C467		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C468		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C469		ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C470		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JK30B472
C471		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C472		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C473		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C474		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104

Ref. No.	Mark	Description	Part No.
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C475		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C476		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C477		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C478		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C479		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C480		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C481		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C482		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C483		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C484		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C485		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C486		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C487		ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMAVSL470
C488		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C505		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C506		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C508		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C509		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C510		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JK30B472
C511		CHIP CERAMIC CAP. CH J 100pF/50V or	CHD1JJ3CH101
		CHIP CERAMIC CAP. CG J 100pF/50V	CHD1JJ3CG101
C513		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C514		CHIP CERAMIC CAP. CH J 330pF/50V or	CHD1JJ3CH331
		CHIP CERAMIC CAP. CG J 330pF/50V	CHD1JJ3CG331
C515		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C516		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C517		CERAMIC CAP.(AX) F Z 0.022μF/25V	CCA1EZTFZ223
C518		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C519		CHIP CERAMIC CAP. CH J 560pF/50V or	CHD1JJ3CH561
		CHIP CERAMIC CAP. CG J 560pF/50V	CHD1JJ3CG561
C521		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C522		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C524		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C527		CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C531		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JK30B472
C533		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V	CHD1EK30B473
C534		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C535		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C538		CHIP CERAMIC CAP. CH J 180pF/50V or	CHD1JJ3CH181
		CHIP CERAMIC CAP. CG J 180pF/50V	CHD1JJ3CG181

Ref. No.	Mark	Description	Part No.
C539		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C540		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JK30B472
C541		CHIP CERAMIC CAP. CH J 18pF/50V or	CHD1JJ3CH180
		CHIP CERAMIC CAP. CG J 18pF/50V	CHD1JJ3CG180
C542		CHIP CERAMIC CAP. CH J 18pF/50V or	CHD1JJ3CH180
		CHIP CERAMIC CAP. CG J 18pF/50V	CHD1JJ3CG180
C543		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CG J 22pF/50V	CHD1JJ3CG220
C544		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CG J 22pF/50V	CHD1JJ3CG220
C545		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CG J 22pF/50V	CHD1JJ3CG220
C546		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CG J 22pF/50V	CHD1JJ3CG220
C547		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C548		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C549		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C550		ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C553		ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C555		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C611		ELECTROLYTIC CAP. 22μF/50V M or	CE1JMASTL220
		ELECTROLYTIC CAP. 22μF/50V M	CE1JMASTL220
C612		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JK30B472
C614		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C701		ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C703		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C706		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V	CHD1EK30B473
C708		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C709		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C711		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C712		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C714		CHIP CERAMIC CAP. B K 1500pF/50V	CHD1JK30B152
C715		CHIP CERAMIC CAP. F Z 0.22μF/16V or	CHD1CZ30F224
		CHIP CERAMIC CAP. FZ Z 0.22μF/25V	CHD1EZ3FZ224
C716		CHIP CERAMIC CAP. F Z 0.22μF/16V or	CHD1CZ30F224
		CHIP CERAMIC CAP. FZ Z 0.22μF/25V	CHD1EZ3FZ224
C751		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C752		ELECTROLYTIC CAP. 47μF/10V M H7	CE1AMAVSL470
C753		ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C754		ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C755		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C756		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C757		ELECTROLYTIC CAP. 47μF/6.3V M or	CE0KMASTL470
		ELECTROLYTIC CAP. 47μF/6.3V M	CE0KMASTL470
C758		CERAMIC CAP.(AX) Y M 0.01μF/16V	CCA1CMT0Y103
C783		CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
		CHIP CERAMIC CAP. CG J 470pF/50V	CHD1JJ3CG471
C784		CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
		CHIP CERAMIC CAP. CG J 470pF/50V	CHD1JJ3CG471
C1061		ELECTROLYTIC CAP. 2200μF/6.3V M	CE0KMASTL222
C1201		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C1202		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100

Ref. No.	Mark	Description	Part No.
C1205		CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1J3CH221
		CHIP CERAMIC CAP. CG J 220pF/50V	CHD1J3CG221
C1206		CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1J3CH221
		CHIP CERAMIC CAP. CG J 220pF/50V	CHD1J3CG221
C1207		CHIP CERAMIC CAP. CH J 47pF/50V or	CHD1J3CH470
		CHIP CERAMIC CAP. CG J 47pF/50V	CHD1J3CG470
C1208		CHIP CERAMIC CAP. CH J 47pF/50V or	CHD1J3CH470
		CHIP CERAMIC CAP. CG J 47pF/50V	CHD1J3CG470
C1221		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C1222		ELECTROLYTIC CAP. 10μF/16V M or	CE1CMASDL100
		ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1223		CHIP CERAMIC CAP. CH J 1000pF/50V or	CHD1J3CH102
		CHIP CERAMIC CAP. CH J 1000pF/25V or	CHD1EJ3CH102
		CHIP CERAMIC CAP. CG J 1000pF/50V	CHD1J3CG102
C1224		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C1245		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1246		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1247		ELECTROLYTIC CAP. 470μF/16V M or	CE1CMASDL471
		ELECTROLYTIC CAP. 470μF/16V M	CE1CMASDL471
C1249		ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMAVSL470
C1351		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C1352		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1353		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1354		CHIP CERAMIC CAP. CH J 100pF/50V or	CHD1J3CH101
		CHIP CERAMIC CAP. CG J 100pF/50V	CHD1J3CG101
C1355		CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZ30F105
C1359		CHIP CERAMIC CAP. CH D 9pF/50V	CHD1JD3CH9R0
C1393		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1394		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C1402		PCB JUMPER D0.6-P5.0	JW5.0T
C1421		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C1422		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1441		CHIP CERAMIC CAP. B K 0.33μF/10V	CHD1AK30B334
C1442		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1445		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1461		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0
C1462		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1471		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0
C1481		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0
C1482		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1486		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C1487		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C1523		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104

Ref. No.	Mark	Description	Part No.
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1531		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C1532		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C2002		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C2004		ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C2012		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C2013		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C2016		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
<b>CONNECTORS</b>			
CN050		CONNECTOR BASE, 18P TUC-P18P-B1	J3TUA18TG001
CN701	A	AFV PCB ASSEMBLY CP2500/9300	H9300AFV
CN701	B	AFV PCB ASSEMBLY CP2500/9311	H9311AFV
CN1051		FMN CONNECTOR, SIDE 22P 22FMN-STRK	JCFNG22JG004
CN1601		FMN CONNECTOR, SIDE 18P 18FMN-STK	JCFNG18JG003
CN2014		FMN CONNECTOR, SIDE 4P 04FMN-STRK	JCFNG04JG004
<b>DIODES</b>			
D051		RECTIFIER DIODE 1N4005	NDQZ001N4005
D052		RECTIFIER DIODE 1N4005	NDQZ001N4005
D053		RECTIFIER DIODE 1N4005	NDQZ001N4005
D054		ZENER DIODE DZ-10BSBT265 or	NDTB00DZ10BS
		ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D056		ZENER DIODE DZ-33BSDT265 or	NDTD00DZ33BS
		ZENER DIODE MTZJT-7733D	QDTD00MTZJ33
D057		RECTIFIER DIODE 1N4005	NDQZ001N4005
D101		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D102		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D103		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D104		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D105		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D106		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D107		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D108		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D109		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D110		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D115		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D118		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D119		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D121		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11

Ref. No.	Mark	Description	Part No.
D301		SWITCHING DIODE 1N4148M or	NDT201N4148M
		SWITCHING DIODE 1SS133(T-77)	QDT2001SS133
D510		SWITCHING DIODE 1N4148M or	NDT201N4148M
		SWITCHING DIODE 1SS133(T-77)	QDT2001SS133
D511		ZENER DIODE DZ-7.5BSAT265 or	NDTA0DZ7R5BS
		ZENER DIODE MTZJT-777.5A	QDTA0MTZJ7R5
D512		SWITCHING DIODE 1N4148M or	NDT201N4148M
		SWITCHING DIODE 1SS133(T-77)	QDT2001SS133
D555		LED MIE-534A2 or	NPZZM1E534A2
		LED SIR-563ST3F P or	QPQPS1R563ST
		LED SIR-563ST3F Q	QPQPS1R563ST
D611		SWITCHING DIODE 1N4148M or	NDT201N4148M
		SWITCHING DIODE 1SS133(T-77)	QDT2001SS133
D701		ZENER DIODE DZ-33BSDT265 or	NDTD00DZ33BS
		ZENER DIODE MTZJT-7733D	QDTD00MTZJ33
D751		ZENER DIODE DZ-8.2BSAT265 or	NDTA0DZ8R2BS
		ZENER DIODE MTZJT-778.2A	QDTA0MTZJ8R2
D1052		SCHOTTKY BARRIER DIODE SB140 or	NDQZ000SB140
		SCHOTTKY BARRIER DIODE ERB81-004	AERB81004***
D1053		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1054		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1055		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1056		PCB JUMPER D0.6-P10.0	JW10.0T
D1057		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1301		ZENER DIODE DZ-5.6BSBT265 or	NDTB0DZ5R6BS
		ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D1401		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D1402		ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
		ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D1501		PCB JUMPER D0.6-P5.0	JW5.0T
LED EXCLUSIVE(A)			
D501		LED(RED) 204HD/E	NPQZ00204HDE
D502		LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D503		LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D504		LED(RED) 204HD/E	NPQZ00204HDE
LED EXCLUSIVE(B)			
D501		LED(RED) LTL-4211N	NPQZLTL4211N
D502		LED(GREEN) LTL-4231N	NPQZLTL4231N
D503		LED(GREEN) LTL-4231N	NPQZLTL4231N
D504		LED(RED) LTL-4211N	NPQZLTL4211N
ICS			
IC301		IC:Y/C/A LA71750AM-MTB	QSZBA0RSY020
IC451		IC:HIFI LA72648M	QSZBA0RSY033
IC501		MICROCONTROLLER 16BIT M37762MCA-AC0GP	QSZAB0RMB159
IC502		IC:EEPROM CAT24WC04JI or	NSZBA0SBG002
		IC:MEMORY BR24C04F-W	QSMBA0SRM004
IC611		V.F.D. 7-BT-292GN	TVFD150FT010
IC612		FL DRIVER IC PT6313-S-TP	NSZBA0TG2006
IC751		IC:SWITCH TC4053BF(N) or	QSMBA0STS002
		IC:SWITCH BU4053BCF-E2	QSMDAO0TRM010
IC1201		IC:OP AMP KIA4558P or	NSZBA0SJY004
		IC:OP AMP NJM4558D	QSZBA0SJR006
IC1204		FIBER OPTIC TRANS.MODULE 0C-0805T*002 or	JWHHA00JD002
		FIBER OPTIC TRANS.MODULE GP1FA512TZV	JWHHA00SH003
IC1402		DRIVER FOR DVD(6CH) MM1567AJBE	QSZBA0TMM082
IC1404		IC:SWITCH TC4053BF(N) or	QSMBA0STS002
		IC:SWITCH BU4053BCF-E2	QSMDAO0TRM010
COILS			

Ref. No.	Mark	Description	Part No.
L052		CHOKE COIL 47μH-K or	LLBD00PKV007
		CHOKE COIL 47μH-K	LLBD00PKV005
L053		INDUCTOR 100μH-K-26T	LLAXKATTU101
L101		BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L251		INDUCTOR 5.6μH-K-26T	LLAXKATTU5R6
L302		INDUCTOR 100μH-K-26T	LLAXKATTU101
L401		CHOKE COIL 47μH-K or	LLBD00PKV007
		CHOKE COIL 47μH-K	LLBD00PKV005
L402		INDUCTOR 47μH-K-5FT	LLARKBSTU470
L451		INDUCTOR 47μH-K-5FT	LLARKBSTU470
L452		PCB JUMPER D0.6-P5.0	JW5.0T
L501		INDUCTOR 100μH-K-26T	LLAXKATTU101
L502		PCB JUMPER D0.6-P5.0	JW5.0T
L503		INDUCTOR 1.8μH-K-26T	LLAXKATTU1R8
L701		INDUCTOR 15μH-K-26T	LLAXKATTU150
L702		PCB JUMPER D0.6-P5.0	JW5.0T
L703		CHOKE COIL 47μH-K or	LLBD00PKV007
		CHOKE COIL 47μH-K	LLBD00PKV005
L704		INDUCTOR 10μH-K-26T	LLAXKATTU100
L1052		PCB JUMPER D0.6-P5.5	JW5.5T
L1251		INDUCTOR 0.47μH-K-26T	LLAXKATTUR47
L1351		INDUCTOR 100μH-K-26T	LLAXKATTU101
L1521		CHOKE COIL 47μH-K or	LLBD00PKV007
		CHOKE COIL 47μH-K	LLBD00PKV005
L2001		INDUCTOR 100μH-K-26T	LLAXKATTU101
L2006		PCB JUMPER D0.6-P5.0	JW5.0T
TRANSISTORS			
Q051		TRANSISTOR KTA1281(Y) or	NQSY0KTA1281
		TRANSISTOR 2SA1020(Y)	QQSY02SA1020
Q052		RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q053		RES. BUILT-IN TRANSISTOR KRA104M or	NQSZ0KRA104M
		RES. BUILT-IN TRANSISTOR BN1L4M-T	QQSZ00BN1L4M
Q054		RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q055		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q056		TRANSISTOR KTC3205(Y) or	NQSY0KTC3205
		TRANSISTOR 2SC3266-Y(TPE2)	QQSY02SC3266
Q057		RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
		RES. BUILT-IN TRANSISTOR BN1F4M-T	QQSZ00BN1F4M
Q058		TRANSISTOR KTA1266(GR) or	NQS40KTA1266
		TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q059		RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q104		TRANSISTOR KTA1266(GR) or	NQS40KTA1266
		TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q105		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q107		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199

Ref. No.	Mark	Description	Part No.
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q108		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q301		TRANSISTOR KTA1266(GR) or	NQS40KTA1266
		TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q302		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q401		CHIP TRANSISTOR FMG4A T148 or	QQZ2000FMG4A
		CHIP TRANSISTOR RN1511(TE85R)	QQZ200RN1511
Q403		TRANSISTOR KTC3203(Y) or	NQSY0KTC3203
		TRANSISTOR 2SC2120-Y(TPE2)	QQSY02SC2120
Q404		TRANSISTOR KTA1266(GR) or	NQS40KTA1266
		TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q405		RES. BUILT-IN TRANSISTOR KRA103M or	NQS20KRA103M
		RES. BUILT-IN TRANSISTOR BN1F4M-T	QQSZ00BN1F4M
Q406		CHIP TRANSISTOR KTC3875Y-RTK	NQ1Y0KTC3875
Q451		CHIP TRANSISTOR KRC103S RTK or	NQ120KRC103S
		CHIP TRANSISTOR FA1F4M-T1B	QQ8Z00FA1F4M
Q502		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q506		PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
		PHOTO TRANSISTOR MID-32A22	NPWZM1D32A22
Q507		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q508		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q509		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815

Ref. No.	Mark	Description	Part No.
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q510		RES. BUILT-IN TRANSISTOR KRC103M or	NQS20KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q511		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q513		RES. BUILT-IN TRANSISTOR KRC103M or	NQS20KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q514		TRANSISTOR KTC3199(BL) or	NQS50KTC3199
		TRANSISTOR 2SC2785(K) or	QQSK02SC2785
		TRANSISTOR 2SC1815-BL(TPE2)	QQS202SC1815
Q515		TRANSISTOR KTC3199(BL) or	NQS50KTC3199
		TRANSISTOR 2SC2785(K) or	QQSK02SC2785
		TRANSISTOR 2SC1815-BL(TPE2)	QQSF02SC1815
Q752		RES. BUILT-IN TRANSISTOR KRC103M or	NQS20KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q1052		TRANSISTOR KTC3203(Y) or	NQSY0KTC3203
		TRANSISTOR 2SC2120-Y(TPE2)	QQSY02SC2120
Q1053		TRANSISTOR KTA1267(Y) or	NQSY0KTA1267
		TRANSISTOR KTA1267(GR) or	NQS10KTA1267
		TRANSISTOR 2SA1175(J) or	QQSJ02SA1175
		TRANSISTOR 2SA1175(H) or	QQSH02SA1175
		TRANSISTOR 2SA1175(F)	QQSF02SA1175
Q1054		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1055		TRANSISTOR KTC3203(Y) or	NQSY0KTC3203
		TRANSISTOR 2SC2120-Y(TPE2)	QQSY02SC2120
Q1201		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1202		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1203		TRANSISTOR KTA1266(GR) or	NQS40KTA1266
		TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q1204		TRANSISTOR KTA1266(GR) or	NQS40KTA1266
		TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
Q1351		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815



Ref. No.	Mark	Description	Part No.
Q1352		TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(F) or	QQS02SC2785
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1502		RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
Q1505		RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
		RES. BUILT-IN TRANSISTOR BA1F4M-T	QQSZ00BA1F4M
<b>RESISTORS</b>			
R051		CARBON RES. 1/6W J 47k $\Omega$ or	RCX6JATZ0473
		CARBON RES. 1/4W J 47k $\Omega$	RCX4JATZ0473
R052		CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R053		CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R054		CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R055		CARBON RES. 1/4W J 10k $\Omega$	RCX4JATZ0103
R058		CARBON RES. 1/4W J 1.2k $\Omega$	RCX4JATZ0122
R059		CARBON RES. 1/4W J 1.2k $\Omega$	RCX4JATZ0122
R060		CARBON RES. 1/4W J 1.2k $\Omega$	RCX4JATZ0122
R061		CARBON RES. 1/6W J 1.8k $\Omega$ or	RCX6JATZ0182
		CARBON RES. 1/4W J 1.8k $\Omega$	RCX4JATZ0182
R062		CHIP RES.(1608) 1/10W J 180 $\Omega$	RRXAJR5Z0181
R065		CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R070		CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R072		CARBON RES. 1/6W J 1 $\Omega$ or	RCX6JATZ01R0
		CARBON RES. 1/4W J 1 $\Omega$	RCX4JATZ01R0
R112		CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R113		CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R116		CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R119		CARBON RES. 1/4W J 68 $\Omega$	RCX4JATZ0680
R121		CARBON RES. 1/6W J 15k $\Omega$ or	RCX6JATZ0153
		CARBON RES. 1/4W J 15k $\Omega$	RCX4JATZ0153
R122		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R124		CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
		CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R128		CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
R129		CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R130		CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
		CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R131		CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R134		CHIP RES.(1608) 1/10W J 6.8k $\Omega$	RRXAJR5Z0682
R136		CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R137		CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R138		CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R140		CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R141		CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R142		CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R143		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R144		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R145		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R146		CHIP RES.(1608) 1/10W J 47k $\Omega$	RRXAJR5Z0473
R147		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R148		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R149		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R150		CHIP RES.(1608) 1/10W J 47k $\Omega$	RRXAJR5Z0473
R251		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R252		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R301		CHIP RES.(1608) 1/10W J 1.2k $\Omega$	RRXAJR5Z0122
R303		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562

Ref. No.	Mark	Description	Part No.
R304		CHIP INDUCTOR MLG1608B18NJT000 or	LLACJB3TE18N
		CHIP INDUCTOR HK1608 18NJ-T	LLACJB3TU18N
R305		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R306		CHIP RES.(1608) 1/10W J 5.6M $\Omega$	RRXAJR5Z0565
R307		CARBON RES. 1/6W J 33 $\Omega$ or	RCX6JATZ0330
		CARBON RES. 1/4W J 33 $\Omega$	RCX4JATZ0330
R309		CHIP INDUCTOR MLG1608B18NJT000 or	LLACJB3TE18N
		CHIP INDUCTOR HK1608 18NJ-T	LLACJB3TU18N
R310		CARBON RES. 1/6W J 33 $\Omega$ or	RCX6JATZ0330
		CARBON RES. 1/4W J 33 $\Omega$	RCX4JATZ0330
R311		CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
R314		CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R316		CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182
R317		CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R318		CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R319		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R320		CHIP RES.(1608) 1/10W J 47k $\Omega$	RRXAJR5Z0473
R321		CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R322		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R323		CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R324		CHIP RES.(1608) 1/10W J 1.2k $\Omega$	RRXAJR5Z0122
R325		CHIP RES.(1608) 1/10W J 1.2k $\Omega$	RRXAJR5Z0122
R326		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R327		CHIP RES.(1608) 1/10W J 6.8k $\Omega$	RRXAJR5Z0682
R328		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R330		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R331		CHIP RES.(1608) 1/10W J 18k $\Omega$	RRXAJR5Z0183
R332		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R333		CHIP RES.(1608) 1/10W J 18k $\Omega$	RRXAJR5Z0183
R334		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R335		CHIP RES.(1608) 1/10W J 100 $\Omega$	RRXAJR5Z0101
R336		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R337		CHIP RES.(1608) 1/10W J 6.8k $\Omega$	RRXAJR5Z0682
R339		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R401		CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R402		CARBON RES. 1/6W J 100 $\Omega$ or	RCX6JATZ0101
		CARBON RES. 1/4W J 100 $\Omega$	RCX4JATZ0101
R404		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R405		CHIP RES.(1608) 1/10W J 47k $\Omega$	RRXAJR5Z0473
R406		CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R407		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R408		CHIP RES.(1608) 1/10W J 12k $\Omega$	RRXAJR5Z0123
R409		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R410		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R411		CHIP RES.(1608) 1/10W J 27k $\Omega$	RRXAJR5Z0273
R412		CHIP RES.(1608) 1/10W J 120 $\Omega$	RRXAJR5Z0121
R413		CHIP RES.(1608) 1/10W J 330k $\Omega$	RRXAJR5Z0334
R414		CHIP RES.(1608) 1/10W J 12k $\Omega$	RRXAJR5Z0123
R415		CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182
R416		CHIP RES.(1608) 1/10W J 1.2k $\Omega$	RRXAJR5Z0122
R417		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R418		CHIP RES.(1608) 1/10W J 12k $\Omega$	RRXAJR5Z0123
R419		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R420		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R421		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R451		CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R452		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R453		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R454		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R455		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R456		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393

Ref. No.	Mark	Description	Part No.
R457		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R458		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R459		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R460		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R461		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R462		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R463		CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R464		CHIP RES.(1608) 1/10W J 3.3k $\Omega$	RRXAJR5Z0332
R465		CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R466		CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R467		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R468		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R469		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R470		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R471		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R472		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R473		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R474		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R475		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R476		CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R477		CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R478		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R479		CHIP RES.(1608) 1/10W J 33 $\Omega$	RRXAJR5Z0330
R480		CHIP RES.(1608) 1/10W J 100 $\Omega$	RRXAJR5Z0101
R481		CHIP RES.(1608) 1/10W J 33 $\Omega$	RRXAJR5Z0330
R482		CARBON RES. 1/6W J 100 $\Omega$ or	RCX6JATZ0101
		CARBON RES. 1/4W J 100 $\Omega$	RCX4JATZ0101
R483		CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R484		CHIP RES.(1608) 1/10W J 6.8k $\Omega$	RRXAJR5Z0682
R501		CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182
R509		CHIP RES.(1608) 1/10W J 180 $\Omega$	RRXAJR5Z0181
R511		CARBON RES. 1/6W G 3.6k $\Omega$ or	RCX6GATZ0362
		CARBON RES. 1/4W G 3.6k $\Omega$	RCX4GATZ0362
R512		CHIP RES.(1608) 1/10W J 68k $\Omega$	RRXAJR5Z0683
R513		CHIP RES.(1608) 1/10W J 33k $\Omega$	RRXAJR5Z0333
R514		CARBON RES. 1/6W G 10k $\Omega$ or	RCX6GATZ0103
		CARBON RES. 1/4W G 10k $\Omega$	RCX4GATZ0103
R516		CARBON RES. 1/6W G 470 $\Omega$ or	RCX6GATZ0471
		CARBON RES. 1/4W G 470 $\Omega$	RCX4GATZ0471
R517		CARBON RES. 1/4W J 270 $\Omega$	RCX4JATZ0271
R519		CARBON RES. 1/6W G 22k $\Omega$ or	RCX6GATZ0223
		CARBON RES. 1/4W G 22k $\Omega$	RCX4GATZ0223
R520		CARBON RES. 1/6W J 330 $\Omega$ or	RCX6JATZ0331
		CARBON RES. 1/4W J 330 $\Omega$	RCX4JATZ0331
R522		CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R523		CARBON RES. 1/6W G 1.5k $\Omega$ or	RCX6GATZ0152
		CARBON RES. 1/4W G 1.5k $\Omega$	RCX4GATZ0152
R525		CARBON RES. 1/6W J 390k $\Omega$ or	RCX6JATZ0394
		CARBON RES. 1/4W J 390k $\Omega$	RCX4JATZ0394
R526		CHIP RES.(1608) 1/10W J 390k $\Omega$	RRXAJR5Z0394
R528		CARBON RES. 1/6W G 4.7k $\Omega$ or	RCX6GATZ0472
		CARBON RES. 1/4W G 4.7k $\Omega$	RCX4GATZ0472
R529		CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R530		CARBON RES. 1/4W J 270 $\Omega$	RCX4JATZ0271
R531		CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R532		CARBON RES. 1/4W J 270 $\Omega$	RCX4JATZ0271
R533		CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R534		CARBON RES. 1/6W J 330 $\Omega$ or	RCX6JATZ0331
		CARBON RES. 1/4W J 330 $\Omega$	RCX4JATZ0331
R535		CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R536		CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182

Ref. No.	Mark	Description	Part No.
R537		CHIP RES.(1608) 1/10W J 680 $\Omega$	RRXAJR5Z0681
R538		CHIP RES.(1608) 1/10W J 1.5k $\Omega$	RRXAJR5Z0152
R539		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R540		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R541		CHIP RES.(1608) 1/10W J 18k $\Omega$	RRXAJR5Z0183
R542		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R543		CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R544		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R545		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R546		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R548		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R549		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R552		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R558		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R560		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R562		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R565		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R567		CHIP RES.(1608) 1/10W J 39k $\Omega$	RRXAJR5Z0393
R568		CHIP RES.(1608) 1/10W J 220k $\Omega$	RRXAJR5Z0224
R569		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R570		CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
		CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R572		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R574		CHIP RES.(1608) 1/10W J 560 $\Omega$	RRXAJR5Z0561
R575		CHIP RES.(1608) 1/10W J 330k $\Omega$	RRXAJR5Z0334
R576		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R577		CHIP RES.(1608) 1/10W J 1.5k $\Omega$	RRXAJR5Z0152
R578		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R581		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R582		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R583		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R584		CHIP RES.(1608) 1/10W J 100 $\Omega$	RRXAJR5Z0101
R585		CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182
R586		CHIP RES.(1608) 1/10W J 820 $\Omega$	RRXAJR5Z0821
R588		CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R601		CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R602		CHIP RES.(1608) 1/10W J 1.5k $\Omega$	RRXAJR5Z0152
R603		CARBON RES. 1/6W J 2.2k $\Omega$ or	RCX6JATZ0222
		CARBON RES. 1/4W J 2.2k $\Omega$	RCX4JATZ0222
R611		CHIP RES.(1608) 1/10W J 3.3k $\Omega$	RRXAJR5Z0332
R613		CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R614		CHIP RES.(1608) 1/10W J 5.1k $\Omega$	RRXAJR5Z0512
R615		CHIP RES.(1608) 1/10W J 5.1k $\Omega$	RRXAJR5Z0512
R616		CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R617		PCB JUMPER D0.6-P5.0	JW5.0T
R703		CARBON RES. 1/6W J 1.8k $\Omega$ or	RCX6JATZ0182
		CARBON RES. 1/4W J 1.8k $\Omega$	RCX4JATZ0182
R704		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R705		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R706		CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R751		CHIP RES.(1608) 1/10W J 12k $\Omega$	RRXAJR5Z0123
R752		CARBON RES. 1/6W J 330 $\Omega$ or	RCX6JATZ0331
		CARBON RES. 1/4W J 330 $\Omega$	RCX4JATZ0331
R753		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R755		CHIP RES.(1608) 1/10W J 47k $\Omega$	RRXAJR5Z0473
R756		CHIP RES.(1608) 1/10W J 820 $\Omega$	RRXAJR5Z0821
R757		CHIP RES.(1608) 1/10W J 820 $\Omega$	RRXAJR5Z0821
R759		CARBON RES. 1/6W J 150 $\Omega$ or	RCX6JATZ0151
		CARBON RES. 1/4W J 150 $\Omega$	RCX4JATZ0151
R760		CHIP RES.(1608) 1/10W J 150 $\Omega$	RRXAJR5Z0151
R761		CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750

Ref. No.	Mark	Description	Part No.
R762		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R763		CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R764		CARBON RES. 1/6W J 47k $\Omega$ or	RCX6JATZ0473
		CARBON RES. 1/4W J 47k $\Omega$	RCX4JATZ0473
R765		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1056		CARBON RES. 1/4W J 180 $\Omega$	RCX4JATZ0181
R1057		CARBON RES. 1/4W J 180 $\Omega$	RCX4JATZ0181
R1060		CARBON RES. 1/6W J 1 $\Omega$ or	RCX6JATZ01R0
		CARBON RES. 1/4W J 1 $\Omega$	RCX4JATZ01R0
R1061		CARBON RES. 1/6W J 1.8k $\Omega$ or	RCX6JATZ0182
		CARBON RES. 1/4W J 1.8k $\Omega$	RCX4JATZ0182
R1062		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1065		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1066		CHIP RES.(1608) 1/10W J 220k $\Omega$	RRXAJR5Z0224
R1067		CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R1068		CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R1069		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1071		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1072		CHIP RES.(1608) 1/10W J 5.6k $\Omega$	RRXAJR5Z0562
R1203		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1204		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1205		CHIP RES.(1608) 1/10W F 20k $\Omega$ or	RRXAFR5H2002
		CHIP RES.(1608) 1/10W F 20k $\Omega$	RRXAFR5Z2002
R1206		CHIP RES.(1608) 1/10W F 20k $\Omega$ or	RRXAFR5H2002
		CHIP RES.(1608) 1/10W F 20k $\Omega$	RRXAFR5Z2002
R1207		CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R1208		CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R1209		CHIP RES.(1608) 1/10W F 30k $\Omega$ or	RRXAFR5H3002
		CHIP RES.(1608) 1/10W F 30k $\Omega$	RRXAFR5Z3002
R1210		CHIP RES.(1608) 1/10W F 30k $\Omega$ or	RRXAFR5H3002
		CHIP RES.(1608) 1/10W F 30k $\Omega$	RRXAFR5Z3002
R1211		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R1212		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1213		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1221		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1222		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1223		CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R1224		CHIP RES.(1608) 1/10W J 470 $\Omega$	RRXAJR5Z0471
R1225		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R1226		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R1227		CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R1228		CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R1235		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1236		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1237		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1238		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1239		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1240		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1245		CHIP RES.(1608) 1/10W J 10 $\Omega$	RRXAJR5Z0100
R1352		CHIP RES.(1608) 1/10W J 1.8k $\Omega$	RRXAJR5Z0182
R1353		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1354		CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R1355		CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R1356		CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
R1360		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1361		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R1364		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R1394		CARBON RES. 1/6W J 100 $\Omega$ or	RCX6JATZ0101
		CARBON RES. 1/4W J 100 $\Omega$	RCX4JATZ0101
R1396		CHIP RES.(1608) 1/10W J 1k $\Omega$	RRXAJR5Z0102
R1421		CHIP RES.(1608) 1/10W F 75 $\Omega$ or	RRXAFR5H75R0

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/10W F 75 $\Omega$	RRXAFR5Z75R0
R1422		CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R1441		CHIP RES.(1608) 1/10W F 75 $\Omega$ or	RRXAFR5H75R0
		CHIP RES.(1608) 1/10W F 75 $\Omega$	RRXAFR5Z75R0
R1442		CARBON RES. 1/4W J 75 $\Omega$	RCX4JATZ0750
R1461		CHIP RES.(1608) 1/10W F 36 $\Omega$ or	RRXAFR5H36R0
		CHIP RES.(1608) 1/10W F 36 $\Omega$	RRXAFR5Z36R0
R1471		CHIP RES.(1608) 1/10W F 36 $\Omega$ or	RRXAFR5H36R0
		CHIP RES.(1608) 1/10W F 36 $\Omega$	RRXAFR5Z36R0
R1481		CHIP RES.(1608) 1/10W F 36 $\Omega$ or	RRXAFR5H36R0
		CHIP RES.(1608) 1/10W F 36 $\Omega$	RRXAFR5Z36R0
R1501		CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
R1502		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2005		CHIP RES.(1608) 1/10W J 6.8k $\Omega$	RRXAJR5Z0682
R2060		CHIP RES.(1608) 1/10W J 100k $\Omega$	RRXAJR5Z0104
R2068		CARBON RES. 1/6W J 330 $\Omega$ or	RCX6JATZ0331
		CARBON RES. 1/4W J 330 $\Omega$	RCX4JATZ0331
R2093		CHIP RES.(1608) 1/10W J 22k $\Omega$	RRXAJR5Z0223
R2094		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2102		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2103		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2104		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2105		CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R2107		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R2108		CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R2110		CARBON RES. 1/6W J 8.2k $\Omega$ or	RCX6JATZ0822
		CARBON RES. 1/4W J 8.2k $\Omega$	RCX4JATZ0822
R2111		CARBON RES. 1/4W J 10k $\Omega$	RCX4JATZ0103
<b>SWITCHES</b>			
SW501		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW506		LEAF SWITCH MXS01830MVP0	SSC0101MCE03
SW507		ROTARY MODE SWITCH SSS-50MD or	SSR0106KB002
		ROTARY MODE SWITCH R8100245	SSR0106U3002
SW511		TACT SWITCH KSM0611B	SST0101HH004
SW601		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW602		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW603		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW2021		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW2022		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
<b>MISCELLANEOUS</b>			
2B11		SHIELD ASSEMBLY H9500ED	0VM414860
2B15		BUSH, LED(F) H3700UD	0VM409508
2B46		ROHM HOLDER H7770JD	0VM304573
2B54		PLATE, GROUND(MAIN) H9500ED	0VM415307
J9		BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
JK101		RGB CONNECTOR MRC-021V-05	JXGL210LY004
JK751		RCA JACK MSP-382V-12 PBSN	JXRL020LY063
JK752		RCA JACK(YELLOW) MSP-281V4-B	JXRL010LY003

Ref. No.	Mark	Description	Part No.
JK753		RCA JACK(WHITE) MSP-281V1-B	JXRL010LY005
JK754		RCA JACK(RED) MSP-281V3-A	JYRL010LY002
JK1202		RCA JACK(BLACK) MSP-281V2-B	JXRL010LY062
JK1401		S TYPE JACK MDC-050V-2.4	JXEL040LY001
JW001		FFC CABLE, 22P FFC/P1.00/250	WX1H9510-001
JW002		FFC CABLE, 18P FFC/P1.00/200	WX1H9510-002
JW003		FFC CABLE, 4P FFC/P1.00/210	WX1H9510-003
PS502		PHOTO INTERRUPTER RPI-302C70	QPWZP1302C70
RM2001		REMOTE RECEIVER MIM-93M6DKF	USESJRSUNT01
TP301		PCB JUMPER D0.6-P10.0	JW10.0T
TP501		PCB JUMPER D0.6-P5.0	JW5.0T
TP502		PCB JUMPER D0.6-P17.0	JW17.0T
TP503		PCB JUMPER D0.6-P6.0	JW6.0T
TP504		PCB JUMPER D0.6-P5.0	JW5.0T
TP751		PCB JUMPER D0.6-P10.0	JW10.0T
TU701		TUNER UNIT TMDG2-631A	UTUNPLBAL012
VR501		CARBON P.O.T. 100k $\Omega$ B	VRCB104HH014
X301		XTAL 4.433619MHz or	FXC445LLN001
		XTAL 4.433619MHz	1811388
X501		XTAL 12.000MHz	FXD126LDS001
X502		XTAL 32.768kHz(20PPM) or	FXC323LQUA01
		XTAL 32.768kHz(20PPM)	FXC323LDS002

## FUNCTION CBA

Ref. No.	Description	Part No.
	FUNCTION CBA (MCV-B) Consists of the following	-----
<b>DIODES</b>		
LED EXCLUSIVE(A)		
D591	LED(RED) 204HD/E	NPQZ00204HDE
LED EXCLUSIVE(B)		
D591	LED(RED) LTL-4211N	NPQZLTL4211N
<b>RESISTORS</b>		
R590	CHIP RES.(1608) 1/10W 0 $\Omega$	RRXAZR5Z0000
R591	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R592	CHIP RES.(1608) 1/10W J 1.5k $\Omega$	RRXAJR5Z0152
R593	CHIP RES.(1608) 1/10W J 2.2k $\Omega$	RRXAJR5Z0222
R594	CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
<b>SWITCHE</b>		
SW591	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW592	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW593	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW594	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW595	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
<b>MISCELLANEOUS</b>		
2B13	BUSH, LED(E) H1600UD	0VM408832
JW007	FLAT CABLE, 4P AWG26#2651/P2.0/130	WX3804S6FF13

## DVD OPEN/CLOSE CBA

Ref. No.	Description	Part No.
	DVD OPEN/CLOSE CBA (MCV-C) Consists of the following	-----
<b>SWITCHES</b>		
SW2020	TACT SWITCH KSM0614B or	SST0101HH013
	TACT SWITCH SKQSAF001A or	SST0101AL041
	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
<b>MISCELLANEOUS</b>		
JW009	FLAT CABLE, 2P AWG26#2651/P2.0/120	WX1HC460-001

## SENSOR CBA

Ref. No.	Description	Part No.
	SENSOR CBA Consists of the following	0VSA14057
<b>TRANSISTORS</b>		
Q503	PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
	PHOTO TRANSISTOR MID-32A22	NPWZM1D32A22
Q504	PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
	PHOTO TRANSISTOR MID-32A22	NPWZM1D32A22

## PSV CBA

Ref. No.	Description	Part No.
	PSV CBA Consists of the following	0VSA14040
	POWER SUPPLY CBA (PSV-A)	-----
	JUNCTION CBA (PSV-B)	-----
	JACK CBA (PSV-C)	-----

## POWER SUPPLY CBA

Ref. No.	Description	Part No.
	POWER SUPPLY CBA (PSV-A) Consists of the following	-----
<b>CAPACITORS</b>		
C013	ELECTROLYTIC CAP. 10 $\mu$ F/50V M or	CE1JMASDL100
	ELECTROLYTIC CAP. 10 $\mu$ F/50V M	CE1JMASTL100
C014	ELECTROLYTIC CAP. 470 $\mu$ F/25V M or	CE1EMASDL471
	ELECTROLYTIC CAP. 470 $\mu$ F/25V M	CE1EMASTL471
C017	ELECTROLYTIC CAP. 1000 $\mu$ F/16V M	CE1CMZPTL102
C018	ELECTROLYTIC CAP. 470 $\mu$ F/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470 $\mu$ F/6.3V M	CE0KMASTL471
C020	ELECTROLYTIC CAP. 22 $\mu$ F/50V M or	CE1JMASDL220
	ELECTROLYTIC CAP. 22 $\mu$ F/50V M	CE1JMASTL220
C021	CERAMIC CAP.(AX) F Z 0.1 $\mu$ F/50V	CCA1JZTFZ104
C022	ELECTROLYTIC CAP. 470 $\mu$ F/35V M or	CE1GMASDL471
	ELECTROLYTIC CAP. 470 $\mu$ F/35V M	CE1GMASTL471
C1001 <sup>△</sup>	METALLIZED FILM CAP. 0.068 $\mu$ F/275V K or	CT2E683HJE06
<sup>△</sup>	METALLIZED FILM CAP. 0.068 $\mu$ F/250V K	CT2E683DC011
C1003	CERAMIC CAP. B K 0.01 $\mu$ F/500V	CCD2JKP0B103
C1004	ELECTROLYTIC CAP. 100 $\mu$ F/400V M	CA2H101S6016
C1005	CERAMIC CAP. SL K 56pF/1KV or	CCD3AKPSL560
	CERAMIC CAP. SL J 56pF/1KV	CCD3AJPSL560
C1006 <sup>△</sup>	SAFETY CAP. 2200pF/250V or	CCN2EMP0E222
<sup>△</sup>	SAFETY CAP. 2200pF/250V	CA2E222MR049
C1007	ELECTROLYTIC CAP. 1000 $\mu$ F/6.3V M	CE0KMZPTL102
C1013	CERAMIC CAP.(AX) X K 3300pF/16V	CCA1CKT0X332
C1018	ELECTROLYTIC CAP. 100 $\mu$ F/10V M or	CE1AMASDL101
	ELECTROLYTIC CAP. 100 $\mu$ F/10V M	CE1AMASTL101

Ref. No.	Description	Part No.
C1021	CERAMIC CAP:(AX) Y M 0.01μF/16V	CCA1CMT0Y103
C1022	CERAMIC CAP:(AX) Y M 0.012μF/16V	CCA1CMT0Y123
C1029	CERAMIC CAP:(AX) X K 5600pF/16V	CCA1CKT0X562
C1032	ELECTROLYTIC CAP. 10μF/16V M or	CE1CMASDL100
	ELECTROLYTIC CAP. 10μF/16V M	CE1CMASDL100
C1033	FILM CAP:(P) 0.022μF/50V J or	CMA1JJS00223
	FILM CAP:(P) 0.022μF/50V J	CA1J223MS029
C1035	ELECTROLYTIC CAP. 470μF/25V M or	CE1EMASDL471
	ELECTROLYTIC CAP. 470μF/25V M	CE1EMASDL471
C1053	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C1054	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1055	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C1105	ELECTROLYTIC CAP. 100μF/16V M or	CE1CMASDL101
	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASDL101
C1106	ELECTROLYTIC CAP. 100μF/35V M or	CE1GMASDL101
	ELECTROLYTIC CAP. 100μF/35V M	CE1GMASDL101
C1107	ELECTROLYTIC CAP. 220μF/6.3V M or	CE0KMASDL221
	ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASTL221
C1108	ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1109	ELECTROLYTIC CAP. 220μF/6.3V M or	CE0KMASDL221
	ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASTL221
<b>DIODES</b>		
D013	RECTIFIER DIODE BA157 or	NDQZ000BA157
	FAST RECOVERY DIODE ERA18-04	QDPZ0ERA1804
D014	SCHOTTKY BARRIER DIODE SB390	NDQZ000SB390
D015	ZENER DIODE DZ-5.6BSCT265 or	NDTC0DZ5R6BS
	ZENER DIODE MTZJT-775.6C	QDTC0MTZJ5R6
D016	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D017	ZENER DIODE DZ-8.2BSAT265 or	NDTA0DZ8R2BS
	ZENER DIODE MTZJT-778.2A	QDTA0MTZJ8R2
D018	RECTIFIER DIODE BA157 or	NDQZ000BA157
	FAST RECOVERY DIODE ERA18-04	QDPZ0ERA1804
D019	RECTIFIER DIODE FR203	NDQZ000FR203
D055	PCB JUMPER D0.6-P10.0	JW10.0T
D1001	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1002	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1003	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1004	RECTIFIER DIODE 1N4005	NDQZ001N4005
D1006	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1008	SCHOTTKY BARRIER DIODE SB140 or	NDQZ000SB140
	SCHOTTKY BARRIER DIODE ERB81-004	AERB81004***
D1011	RECTIFIER DIODE BA159 or	NDQZ000BA159
	RECTIFIER DIODE ERA22-10	QDPZ0ERA2210
D1012	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1016	RECTIFIER DIODE FR101	NDWZ000FR101
D1017	ZENER DIODE DZ-20BSBT265 or	NDTB00DZ20BS
	ZENER DIODE MTZJT-7720B	QDTB00MTZJ20
D1018	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1022	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1024	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1025	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1026	ZENER DIODE DZ-5.1BSBT265 or	NDTB00DZ5R1BS

Ref. No.	Description	Part No.
	ZENER DIODE MTZJT-775.1B	QDTB00MTZJ5R1
D1030	SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D1051	PCB JUMPER D0.6-P10.0	JW10.0T
D1060	RECTIFIER DIODE 1N4005	NDQZ001N4005
<b>ICS</b>		
IC1001△	PHOTOCOUPLER EL817A or	NPEA000EL817
△	PHOTOCOUPLER EL817B or	NPEB000EL817
△	PHOTOCOUPLER EL817C or	NPEC000EL817
△	PHOTOCOUPLER LTV-817B-F or	NPEB00LTV817F
△	PHOTOCOUPLER LTV-817C-F	NPEC00LTV817F
IC1051	VOLTAGE REGULATOR PQ070XF01SZ	QSZBA0SSH026
IC1052	VOLTAGE REGULATOR PQ070XF01SZ	QSZBA0SSH026
<b>COILS</b>		
L013	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K	LLBD00PKV005
L1001	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L1002	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L1003△	LINE FILTER 56MH TLF14CB5630R2 or	LLBG00ZTU022
△	LINE FILTER 50MH LF-4D-E503	LLBG00ZKQ009
L1004	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L1009	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K	LLBD00PKV005
L1010	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K	LLBD00PKV005
L1011	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K	LLBD00PKV005
L1012	CHOKE COIL 47μH-K or	LLBD00PKV007
	CHOKE COIL 47μH-K	LLBD00PKV005
<b>TRANSISTORS</b>		
Q1001	FET 2SK3566	QFWZ02SK3566
Q1003	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1008	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
Q1009	TRANSISTOR KTC3199(Y) or	NQSY0KTC3199
	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	TRANSISTOR 2SC1815-GR(TPE2)	QQS102SC1815
<b>RESISTORS</b>		
R013	CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
	CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R057	CHIP RES.(1608) 1/10W J 220k Ω	RRXAJR5Z0224
R068	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R069	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R1002	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R1003	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R1004	METAL OXIDE FILM RES. 2W J 82k Ω or	RN02JZLZ0823

Ref. No.	Description	Part No.
	METAL OXIDE FILM RES. 2W J 82k $\Omega$	RN02JZQZ0823
R1005	CARBON RES. 1/4W J 1M $\Omega$	RCX4JATZ0105
R1006	CARBON RES. 1/4W J 1M $\Omega$	RCX4JATZ0105
R1007	CARBON RES. 1/4W J 1M $\Omega$	RCX4JATZ0105
R1008	CARBON RES. 1/4W G 680 $\Omega$	RCX4GATZ0681
R1010	CARBON RES. 1/6W J 22k $\Omega$ or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k $\Omega$	RCX4JATZ0223
R1011	METAL OXIDE FILM RES. 1W J 1.3 $\Omega$ or	RN011R3ZU001
	METAL OXIDE FILM RES. 1W J 1.3 $\Omega$	RN011R3KE009
R1020	CARBON RES. 1/6W J 1.5k $\Omega$ or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k $\Omega$	RCX4JATZ0152
R1021	CARBON RES. 1/6W J 22k $\Omega$ or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k $\Omega$	RCX4JATZ0223
R1022	CARBON RES. 1/6W J 1k $\Omega$ or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R1023	CARBON RES. 1/6W J 330 $\Omega$ or	RCX6JATZ0331
	CARBON RES. 1/4W J 330 $\Omega$	RCX4JATZ0331
R1024	CARBON RES. 1/6W J 1k $\Omega$ or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R1025	CARBON RES. 1/6W J 68k $\Omega$ or	RCX6JATZ0683
	CARBON RES. 1/4W J 68k $\Omega$	RCX4JATZ0683
R1029	CARBON RES. 1/6W J 100k $\Omega$ or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k $\Omega$	RCX4JATZ0104
R1032	CARBON RES. 1/4W J 1.8k $\Omega$	RCX4JATZ0182
R1035	CARBON RES. 1/6W J 1k $\Omega$ or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R1036	CARBON RES. 1/6W J 100k $\Omega$ or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k $\Omega$	RCX4JATZ0104
R1037	CARBON RES. 1/6W J 10k $\Omega$ or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k $\Omega$	RCX4JATZ0103
R1038	CARBON RES. 1/6W J 100k $\Omega$ or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k $\Omega$	RCX4JATZ0104
R1039	CARBON RES. 1/6W J 470k $\Omega$ or	RCX6JATZ0474
	CARBON RES. 1/4W J 470k $\Omega$	RCX4JATZ0474
R1040	CARBON RES. 1/6W J 5.6 $\Omega$ or	RCX6JATZ05R6
	CARBON RES. 1/4W J 5.6 $\Omega$	RCX4JATZ05R6
R1043	METAL OXIDE FILM RES. 1W J 2.7 $\Omega$ or	RN01JZLZ02R7
	METAL OXIDE FILM RES. 1W J 2.7 $\Omega$	RN01JZQZ02R7
R1051	CHIP RES.(1608) 1/10W J 3.9k $\Omega$	RRXAJR5Z0392
R1052	CHIP RES.(1608) 1/10W J 10k $\Omega$	RRXAJR5Z0103
R1059	CARBON RES. 1/6W J 1k $\Omega$ or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k $\Omega$	RCX4JATZ0102
R1063	CHIP RES.(1608) 1/10W J 8.2k $\Omega$	RRXAJR5Z0822
R1064	CHIP RES.(1608) 1/10W J 4.7k $\Omega$	RRXAJR5Z0472
R2126	CARBON RES. 1/4W J 6.8k $\Omega$	RCX4JATZ0682
R2127	CARBON RES. 1/4W J 6.8k $\Omega$	RCX4JATZ0682
<b>MISCELLANEOUS</b>		
2B33	HEATSINK(1) H9500ED or	0VM414987A
	HEATSINK(2) H9500ED	0VM414989
2L053	SCREW, S-TIGHT M3X8 BIND + CHROME or	GBMS3080
	SCREW, S-TIGHT M3X8 BIND + CHROME	GBMS3080
AC1001△	AC CORD PE8G2CG9G0A-055	WAE0162LW001
F1001△	FUSE T1.6AL/250V or	PAGC20BW3162
△	FUSE T1.6AL/250V or	1790994
△	FUSE 50T016H 1.6A/250V	PAGH20BHV162
FH1001	FUSE HOLDER MSF-015	XH01Z00LY001
FH1002	FUSE HOLDER MSF-015	XH01Z00LY001
J922	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
T001△	SWITCHING TRANSFORMER CSA-SW0274B	LTT00EPSA142

## JUNCTION CBA

Ref. No.	Description	Part No.
	JUNCTION CBA (PSV-B) Consists of the following	-----
<b>CONNECTOR</b>		
CN003	CONNECTOR, 18P TUC-P18X-B1	JCTUS18TG001
<b>MISCELLANEOUS</b>		
JW005	FLAT CABLE, 9P AWG26#2651/P2.0/100	WX3809S6FF10
JW006	FLAT CABLE, 9P AWG26#2651/P2.0/100	WX3809S6FF10

## JACK CBA

Ref. No.	Description	Part No.
	JACK CBA (PSV-C) Consists of the following	-----
<b>CAPACITORS</b>		
C101	CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JK30B102
C102	ELECTROLYTIC CAP. 1 $\mu$ F/50V M or	CE1JMASDL1R0
	ELECTROLYTIC CAP. 1 $\mu$ F/50V M	CE1JMASTL1R0
C105	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C106	CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/50V	CHD1JJ3CG471
C108	ELECTROLYTIC CAP. 470 $\mu$ F/6.3V M or	CE0KMASDL471
	ELECTROLYTIC CAP. 470 $\mu$ F/6.3V M	CE0KMASTL471
C110	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
C111	CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
	CHIP CERAMIC CAP. CG J 470pF/50V	CHD1JJ3CG471
C119	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JK30B222
<b>DIODES</b>		
D112	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
D113	ZENER DIODE DZ-11BSAT265 or	NDTA00DZ11BS
	ZENER DIODE MTZJT-7711A	QDTA00MTZJ11
<b>COIL</b>		
L102	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
<b>TRANSISTORS</b>		
Q103	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1015-GR(TPE2)	QQS102SA1015
<b>RESISTORS</b>		
R111	CHIP RES.(1608) 1/10W J 220 $\Omega$	RRXAJR5Z0221
R114	CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R117	CARBON RES. 1/4W J 680 $\Omega$	RCX4JATZ0681
R118	CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R120	CARBON RES. 1/4W J 68 $\Omega$	RCX4JATZ0680
R123	CARBON RES. 1/4W J 820 $\Omega$	RCX4JATZ0821
R125	CARBON RES. 1/6W J 4.7k $\Omega$ or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k $\Omega$	RCX4JATZ0472
R126	CHIP RES.(1608) 1/10W J 75 $\Omega$	RRXAJR5Z0750
<b>MISCELLANEOUS</b>		
2B53	PLATE, GROUND(21PIN) H9500ED	0VM415201
JK1402	RGB CONNECTOR MRC-021V-03	JXGL210LY003
JW008	FLAT CABLE, 10P AWG26#2651/P2.0/120	WX3810S6FF12

# AFV CBA

Ref. No.	Mark	Description	Part No.
	A B	AFV CBA AFV CBA Consists of the following	0VSA13129 0VSA13077
<b>CAPACITORS</b>			
C1		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C4		CHIP CERAMIC CAP. CH J 56pF/50V or	CHD1JJ3CH560
		CHIP CERAMIC CAP. CG J 56pF/50V	CHD1JJ3CG560
C5		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CG J 22pF/50V	CHD1JJ3CG220
C6		CHIP CERAMIC CAP. CH J 56pF/50V or	CHD1JJ3CH560
		CHIP CERAMIC CAP. CG J 56pF/50V	CHD1JJ3CG560
C7		CHIP CERAMIC CAP. CH C 3pF/50V or	CHD1JC3CH3R0
		CHIP CERAMIC CAP. CJ C 3pF/50V or	CHD1JC3CJ3R0
		CHIP CERAMIC CAP. CH D 3pF/50V	CHD1JD3CH3R0
C8		CHIP CERAMIC CAP. CH C 3pF/50V or	CHD1JC3CH3R0
		CHIP CERAMIC CAP. CJ C 3pF/50V or	CHD1JC3CJ3R0
		CHIP CERAMIC CAP. CH D 3pF/50V	CHD1JD3CH3R0
C11		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C12		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASL100
C13		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C14		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C15		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASL100
C16		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASL100
C17		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C19		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C20		ELECTROLYTIC CAP. 3.3μF/50V M H7	CE1JMASL3R3
C21		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C22		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASL100
C24		ELECTROLYTIC CAP. 0.22μF/50V M H7	CE1JMASLR22
<b>CONNECTOR</b>			
CN1		ANGLE PIN HEADER, 9P 6029B-1-09Z003-T	5700069
<b>DIODES</b>			
D2		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
<b>ICS</b>			
IC1	A	IC:AUDIO PROCESSOR MSP3407G-QG-B8 or	NSZBA0SP3001
	A	IC:AUDIO PROCESSOR MSP3407G-QG-B8- V3	NSZBA0SP3004
IC1	B	IC:AUDIO PROCESSOR MSP3417G-QG-B8 or	NSZBA0SP3002
	B	IC:AUDIO PROCESSOR MSP3417G-QG-B8- V3	NSZBA0SP3005
<b>COILS</b>			
L1		INDUCTOR 10μH-K-26T	LLAXKATTU100
L2		PCB JUMPER D0.6-P5.0	JW5.0T
L3		INDUCTOR 18μH-K-26T	LLAXKATTU180
L4		INDUCTOR 10μH-K-26T	LLAXKATTU100
<b>RESISTORS</b>			
R1		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R4		CHIP RES.(1608) 1/10W J 120k Ω	RRXAJR5Z0124
R5		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R6		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000

Ref. No.	Mark	Description	Part No.
<b>MISCELLANEOUS</b>			
X1		X'TAL 18.432MHz	FXD186LLN001

# DECK PARTS LIST

## NOTE:

Four different, but interchangeable, types of B558 (LOADING MOTOR) may be installed in these models. Please confirm B558 (LOADING MOTOR) type by a part number on it. B558 (LOADING MOTOR) type varies in combination with L1151. Please see Table 1 for details and combination.

**Table 1 (B558 and L1151 Combination)**

LOADING MOTOR (B558)		SCREW (L1151)	
Description	Parts No.	Description	Parts No.
LOADING MOTOR M31E-1 R-14 7376	MMDZB12MM003	SCREW, SEMS M2.6X4 PAN HEAD+	CPM39040
LOADING MOTOR M31E-1 R-14 7391	MMDZB12MM004		
LOADING MOTOR MDB2B80	MMDZB12SJ008	SCREW, SEMS M3X4 PAN HEAD+	CPM33040
LOADING MOTOR MDB2B82	MMDZB10SJ001		

Ref.No	Description	Part No.
B2	CYLINDER ASSEMBLY MK12 PAL 4HD HIFI or CYLINDER ASSEMBLY(V) MK12 PAL 4HD HIFI	N1767CYL N1769CYL
B3	LOADING MOTOR ASSEMBLY MK11 TVCR	0VSA13465
B8	PULLEY ASSEMBLY(HI) MK12	0VSA13501
B9	MOVING GUIDE S PREPARATION MK12	0VSA13560
B10	MOVING GUIDE T PREPARATION MK12	0VSA13562
B11	LOADING ARM(TU) ASSEMBLY MK12	0VSA13300
B12	LOADING ARM(SP) ASSEMBLY MK12	0VSA13299
B31	AC HEAD ASSEMBLY MK12	0VSA13275
B35	TAPE GUIDE ARM ASSEMBLY MK12	0VSA13277
B37	CAPSTAN MOTOR 288/VCCM012	N9671CML
B52	CAP BELT MK10	0VM411138
B73	FE HEAD ASSEMBLY MK11 or FE HEAD ASSEMBLY MK11 or FE HEAD(MK11) MH-131SF11 or FE HEAD(MK11) VTR-1X2ERS11-148 or FE HEAD(MK12) VTR-1X2ERS11-155 or FE HEAD(MK12) HVFHP0047A	N9742FEL N9743FEL DHVEC01Z0005 DHVEC01TE004 DHVEC01TE005 DHVEC01AL007
B74	PRISM MK10	0VM202870
B86	F BRAKE ASSEMBLY(HI) MK12	0VSA13447
B121	WORM MK12	0VM414091
B126	PULLEY MK12	0VM414330B
B133	IDLER ASSEMBLY(HI) MK12	0VSA13451
B148	TG CAP MK6	0VM407664C
B300	C DRIVE LEVER(TU) MK12	0VM203773
B303	F DOOR OPENER MK12 or F DOOR OPENER MK12	0VM203751C 0VM203751
B313	C DRIVE SPRING MK12	0VM414145
B347	GUIDE HOLDER A MK10	0VM304920
B354	SLIDER(TU) MK12	0VM101172F
B355	SLIDER(SP) MK12	0VM101182
B359	CLEANER LEVER MK10	0VM304413
B360	CLEANER ROLLER MK9	0VM410032C
B361	CL POST MK10	0VM411114
B410	PINCH ARM(A) ASSEMBLY(4) MK12 or	0VSA13572

Ref.No	Description	Part No.
	PINCH ARM(A) ASSEMBLY(5) MK12	0VSA13788
B411	PINCH SPRING MK12	0VM414644
B414	M BRAKE(SP) ASSEMBLY(HI) MK12	0VSA13655
B416	M BRAKE(TU) ASSEMBLY(HI) MK12	0VSA13449
B417	TENSION SPG(3002654) MK12	0VM414221E
B425	LOCK LEVER SPRING MK10	0VM411110
B482	CASSETTE PLATE MK12	0VM203749
B483	LOCK LEVER MK12	0VM414095
B487	BAND BRAKE(SP) MK12	0VM305723
B488	MODE LEVER(HI) MK12	0VM101175J
B491	CAM GEAR(A)(HI) MK12	0VM101176
B492	MODE GEAR(LM) MK12	0VM204236
B494	C DOOR OPENER MK12	0VM305719
B499	T LEVER HOLDER MK12	0VM305729
B501	WORM HOLDER MK12	0VM203767
B507	REEL WASHER MK9 5*2.1*0.5	0VM410058
B508	S BRAKE SPRING(HI) MK12	0VM414899
B513	P.S.W F 6*2.55*0.5	0VM402629A
B514	SCREW RACK MK10	0VM411535
B516	REEL WASHER MK9 5*2.1*0.5	0VM410058
B518	P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B521	REV BRAKE SPG(HI) MK12	0VM414943
B522	TG POST ASSEMBLY MK10	0VSA11012
B525	LDG BELT MK11	0VM412804
B529	CLEANER ASSEMBLY MK10	0VSA11161
B551	FF ARM(HI) MK12	0VM306183
B553	REV SPRING MK11	0VM412555
B555	RACK ASSEMBLY MK12	0VSA13289
B557	MOTOR PULLEY U5 or MOTOR PULLEY U5	0VM403205A 0VM403205A
B558	LOADING MOTOR MDB2B82 or LOADING MOTOR MDB2B80 or LOADING MOTOR M31E-1 R-14 7376 or LOADING MOTOR M31E-1 R14 7391	MMDZB10SJ001 MMDZB12SJ008 MMDZB12MM003 MMDZB12MM004
B559	CLUTCH ASSEMBLY(HI) MK12	0VSA13450
B562	C DRIVE LEVER(SP) MK12	0VM203772
B563	SLIDER SHAFT MK12	0VM305762
B564	M GEAR(HI) MK12	0VM305755
B565	SENSOR GEAR(HI) MK12	0VM305756
B567	PINCH ARM(B) MK12	0VM305718
B568	BT ARM MK12	0VM305728
B571	P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B572	P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B573	REEL S MK11	0VM203436
B574	REEL T MK10	0VM202872C
B578	TR GEAR A MK10	0VM304440
B579	TR GEAR B MK12	0VM305900
B580	TR GEAR C MK12	0VM305743A
B581	CENTER GEAR MK11	0VM305081
B582	TR GEAR SPRING MK10	0VM411187
B583	CAM WASHER MK12	0VM414741
B584	TR GEAR SHAFT MK10	0VM411186
B585	PSW(317505) MK11	0VM413663
B587	TENSION LEVER ASSEMBLY MK12	0VSA13279
B590	BRAKE ARM(TU) MK12	0VM203752E
B591	BAND BRAKE(TU) MK12	0VM305724C
B592	TG POST MK10	0VM411108E



Ref.No	Description	Part No.
L1051	SCREW, B-TIGHT M2.6X6 PAN HEAD+	GPMB9060
L1053	SCREW, S-TIGHT M2.6X8 WASHER HEAD+	GCMS9080
L1151	SCREW, SEMS M3X4 PAN HEAD + or	CPM33040
	SCREW, SEMS M2.6X4 PAN HEAD+	CPM39040
L1191	SCREW, S-TIGHT M2.6X8 WASHER HEAD+	GCMS9080
L1321	SCREW, S-TIGHT M3X6 BIND HEAD+	GBMS3060
L1406	AC HEAD SCREW MK9	0VM410964
L1450	SCREW, SEMS M2.6X5 PAN HEAD+	CPM39050
L1466	SCREW, S-TIGHT M2.6X6 BIND HEAD+	GBMS9060
L1467	SCREW, S-TIGHT M2.6X5 WASHER HEAD+	GCMS9050

